76 LASERLAB 30"

50 LASERLAB 20"

30 LASERLAB 12"

INSTRUCTIONS FOR INSTALLATION, USE AND MAINTENANCE

ImageLab V4.00.262	OrderProcessor V1.04.022	Nov 2 2006 09:05:23
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- ORDER MANAGER - MULTI FORMAT - PAPER CALIBRATION - WIDE RANGE OF FORMAT FILTERS -

Imagelab v4

LaserLab 127 - 50in
LaserLab 50 - 20in. & VStation
Compact LaserLab76 - 30in.
LaserVideoLab 30 - 12in.
LaserLab 76 - 30in.
JStation

Printer parameters verification...

ImageLab® Rel. 4.x

A.B. & A.B.

Last Update: 2006, November 17

This manual is an important part of the LaserLab equipment. Hold it with care during the whole equipment lifetime .

READ CAREFULLY THE MANUAL BEFORE EVERY OPERATION ON THE EQUIPMENT.

LaserLab instructions for use

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LaserLab instruction for use

Contents

LaserLab instructions for use

1 General informations

The informations included in this manual are intended for a correct use of the **LaserLab** equipment. Correct use and limits are also indicated.

Follow carefully the manual instructions in order to guarantee the operator safety, optimize the work and increase the equipment lifetime.

For any information please contact us at the following phone number:

(+39) 0425757375

Or send an email to the following address:

service@polielettronica.it

Or send us our *spare parts order request - failure report -information request* module to the following address:

Polielettronica S.p.A.

45030 S.Maria Maddalena (RO) ITALY - Via Nazionale 55

1.1 Definitions

In this sections we describe the definitions used in this manual. The **§** symbol marked definitions are in compliance with the **CEI60950** norm.

§ Tool

Screwdriver or any other object used to move a screw or a fixing part.

§ Service personnel

Experienced and properly trained person to be aware of any possible danger of a service operation, and of every safety precaution.

§ Operator

Each person using the equipment but not included in the service personnel. In this manual the terms user and operator have the same meaning.

Polielettronica technician

A technician allowed to perform any service operation, including the ones not described in this manual.

1.2 Warning and caution symbols

WARNING. It denotes a hazard. It calls attention to a procedure, practice, or the like, which, if not correctly performed or adhered to, could result in injury or death. Do not proceed beyond a warning until the indicated conditions are fully understood and met.

CAUTION. It denotes a hazard. It calls attention to a procedure, practice, or the like, which, if not correctly performed or adhered to, could result in damage or destruction of part or all of the product. Do not proceed beyond a warning until the indicated conditions are fully understood and met.

ADVISE. It calls attention to a procedure, practice, or the like, to be performed carefully following the manual instructions.

1.3 General safety warnings

Before executing any operation requiring opening the equipment and accessing internal parts, switch off the equipment in safety conditions:

1) Switch off the equipment through its proper MAIN SWITCH;

2)Disconnect the equipment from the general mains supply.

2 Producer and equipment identification

The identification plate is placed on the rear side of the panel, near the electrical connections. It is shown in fig. 1
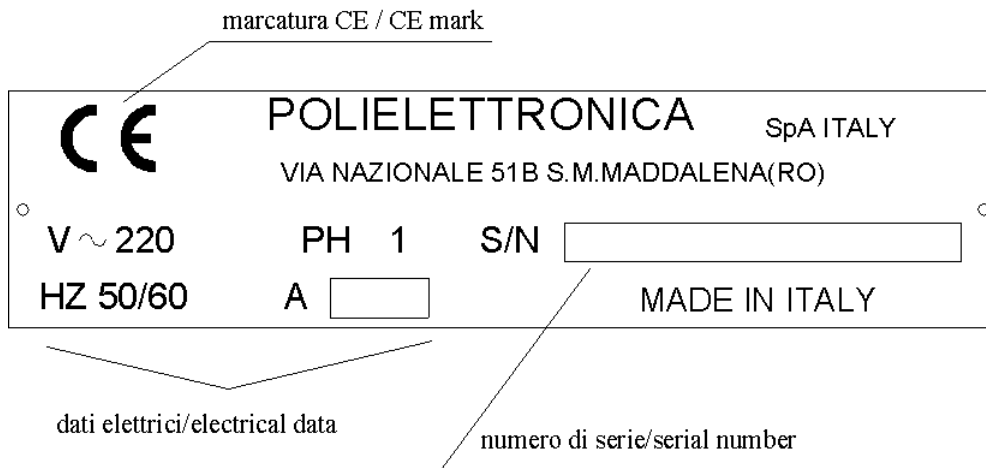
Fig.1 - Identification plate

2.1 Technical service information

Please contact us at the following phone number:

(+39) 0425757375

Or send an email to the following address:

service@polielettronica.it

2.2 General safety information

Read carefully this manual before starting up and using the equipment or before performing any technical operation on the equipment.

Read carefully the equipment warranty included to this manual. Warranty void for failure or damages due to operations performed not in accord to this manual instructions.

ATTENTION. The equipment power supply must be connected to an electric panel featuring a 16A safety switch (overcurrent and ground fault protection).

This equipment cannot be placed and used in any explosion risk environment. It is absolutely forbidden to use the equipment for any other use except the ones indicated in this manual. Do not modify any part of the equipment to fit them to other devices.

2.3 Attached documents

To this manual are attached the following documents:

1) CE declaration of conformity.
2) Warranty.
3) Spare parts order, failure report and information request module.

Found in Chapter .

4) Complete list of spare parts.

Found in the manual EXPLODED VIEW section.

Other attached documents:

5) UPS unit manual for use and maintenance.
6) Monitor manual for use and maintenance.

3 Technical features

3.1 General description, use and limits.

The LaserLab is a *color laser printer* working on *photographic paper*.

*The quality of the results is ensured only if the photographic paper is designed for **digital printing**. The system works only with rolls of paper winded with emulsion out (sensitive side)*

Resolution. Two output resolutions are available:

254dpi   (10 dots/mm)

305dpi   (12dots/mm)

The resolution can be set during paper calibration.

***Attention**: the precision on the paper transport is **±1mm** guaranteed.*

*The system has to be considered as a single unit, even though it appears to be composed of different components. The computer, the interface unit, the exposure unit and the paper processor are strictly connected. **Attention**: The computer is an integral part of the printer, the operating system and the management software ImageLab are the only parts that can be installed and executed on the unit.*

The installation of any other software or peripherals is not allowed; Only Polielettronica S.p.A. can authorize installation of software or hardware units. If the previous directives are not followed by the user, Polielettronica S.p.A. cannot warranty the integrity of the system and it proper operation, the LaserLab system is considered out of warranty.

The connection to a network is allowed only for printing data transfer (files where the images are stored). The user is responsable to check out the presence of any software viruses that can compromise the integrity of the LaserLab system.

The compressed air, necessary to operate, must be absolutely humidity free and perfectly filtered, to avoid risks of serious damagement to the printing section. Warranty void for any damagement caused if the previous directives are not respected.

The printing correct performance is guaranteed only in the following environmental conditions:

Temperature: 21÷27°C

Moisture: 40÷50% Rh

3.2 System components

3.2.1 LaserLab 30 (12")

The components of the LaserLab 30 are shown in fig. 2.
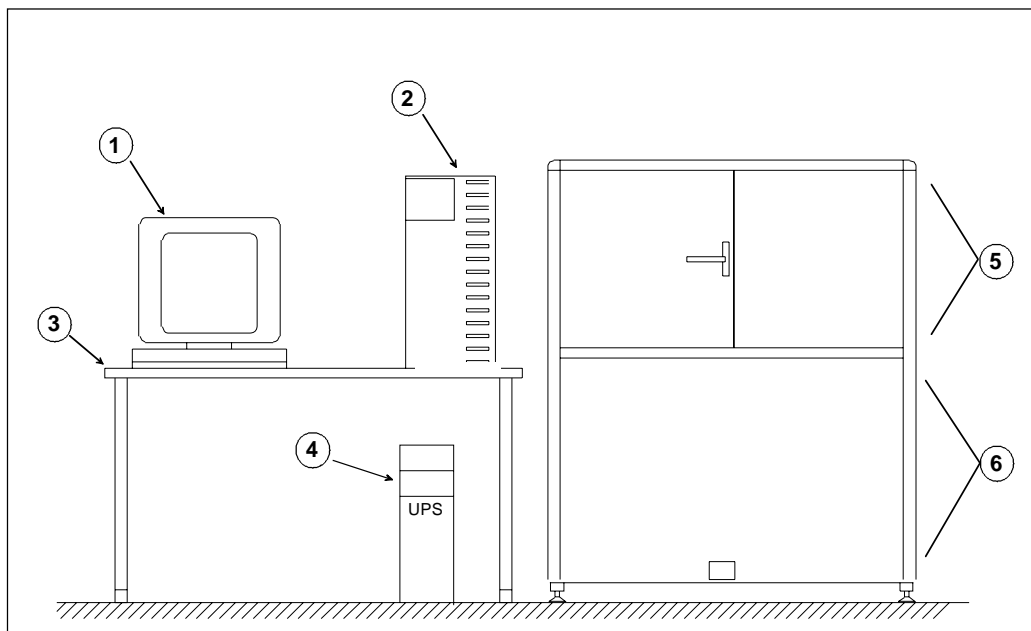
Fig.2 - LaserLab 30 (12") components

    1) PC monitor.
    2) PC cabinet
    3) Table.
    4) UPS unit.
    5) Transport and printing section.
    6) Laser optics section.

Inside the transport section (5) is placed the **LMI** panel.

Inside the laser optics section are placed:

-      The laser group, together with the laser power supply and the modulator control panel

(see fig. 10 on page 19).

- The power group (**M707** DC power supply, **DRLIMO** linear motor driver and the 220VAC service sockets). It is placed behind the laser optics group (see fig. 7 on page 16).

- The fan group, as shown in fig. 8 on page 17.

3.2.2 LaserLab 50 (20") and 76 (30")

The components of the LaserLab 50 and 76 are shown in fig. 3.
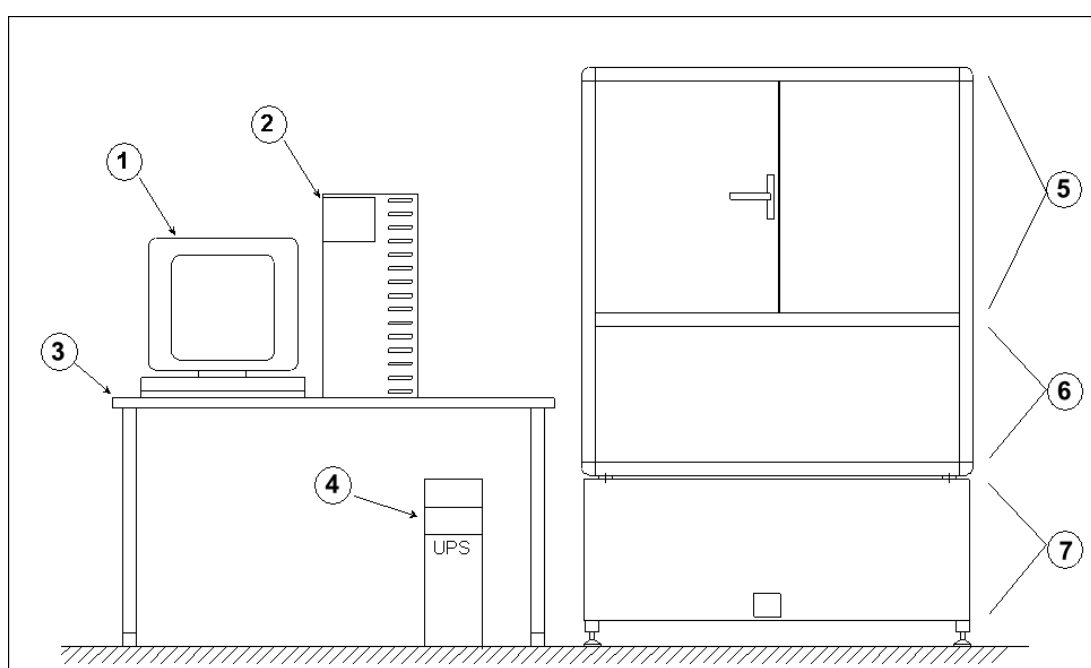
Fig.3 - LaserLab 50/76 (20"/30") components

1) PC monitor.
2) PC cabinet
3) Table.
4) UPS unit.
5) Transport and printing section.
6) Laser optics section.
7) Power supply trolley and fans section.

Inside the transport section (5) is placed the **LMI** panel.

Inside the section number (7) are placed:

- The power supply trolley, shown in fig. 7 on page 16.

- The fan group, shown in fig. 8 on page 17.

3.3 Accessories

- Densitometer.

- Dry air compressor.

To purchase these articles please contact our sales office.

Polielettronica S.p.A. can choose among different accessories models to be coupled to the LaserLab equipment, depending on the customer request and on the technology state of the art.

3.4 Printable sizes

Model **Laserlab 30 (12")**:	305x500mm (12x19½")	**MAX**
	102x89mm (4x3½")	**MIN**.
Model **Laserlab 50 (20")**:	508x820mm (20x32")	**MAX**
	203x178mm (8x7")	**MIN**.
Model **Laserlab 76 (30")**:	762x1250mm (30x49")	**MAX**
	508x300mm (20x12")	**MIN**.

3.5 Technical data

- Weight Kg 625.

- Power supply mains voltage: 230V~ 1 phase 50/60Hz.

> ⚠️ ***ATTENTION: if the RA4 paper processor is coupled with the Laser-Lab, the customer must specify the mains voltage frequency (50 or 60Hz). A three phase mains supply is necessary too.***

- Maximum sinked current: **10A**. Medium sinked current is **6A**, increasing up to 10A due to laser tubes aging.

- Maximum absorbed power: **2300VA**. Medium absorbed power is **1500VA**, increasing up to 2300VA due to laser tubes aging.

- Power factor: **0,8** minimum.

- Autonomy in case of mains supply loss: **10 minutes**.

- Transport section fan air output: about 485m^3/hour, increasing of 6,5°C the environment temperature.

- Stocking temperature: -30°C / 60°C.

-        Air sinking from the compressor unit: less than 25l/min.

3.6 Applicable standards and directives

73/23/EEC (Low Voltage Directive):

EN60950 European Standard.

89/336/EEC (EMC Directive):

EN55022 European Standard.

EN55024 European Standard.

See also section .

3.7 Notice

This system uses technology under license to U.S. patent No. 5,459,505 owned by Esko-Graphics A/S.

4 Installation, Connection and Placing

4.1 Inspection and preliminary operations

Before any operation on the equipment, unpack the shipping cartons and inspect every item for evidence of damage. If any item appears to be damaged, don't try to fix it, refer to your seller.

ATTENTION: the items weighting more than 20Kg must be moved and placed by more than one person.

The installation must be performed by service personnel only.

Before installing the equipment it is necessary to remove the plate locking the laser group and the sled lock.

4.2 Environment and placing

*Placement and vibrations. For the best results, it is necessary to take extreme care in positioning LaserLab; it must be placed on a **stable floor**, **without vibrations and oscillations**. The presence of heavy traffic, railways or underground in the proximity of the labs can generate vibrations, and these vibrations damage the results of the prints.*

Attention! No object and no person should touch the main body of the LaserLab during printing, as they could induce vibrations visible on the print.

*Room temperature. The temperature into the working place should fit within the **21-27°C** range. Inside the printer there are flexible transmission systems; these transmission system can lose this flexibility if the temperature becomes too low and this could cause also vibrations on the print. An excessive temperature can cause problems to the temperature regulation system.*

Humidity. The humidity must fit into the 40-50% Rh range. A lower value causes curling on the paper, and the print will be not flat when on the exposure drum. Another problem caused by poor humidity is the dust, which remains suspended in the atmosphere and the air filters of the LaserLab cannot eliminate it completely. An excessive humidity rate is dangerous for the electronic components, as it induces also a fast opacification of the optical transmission system.

Attention! In every case, A good cleaning of the working place is extremely important.

4.3 Printer - paper processor coupling

Although the printer plus the processor is an integrated printing system, the printing section is not mechanically connected to the paper processor as a few millimeters separate the two units; this way, no vibration is transmitted from the paper processor to the printer.

The first step is to put in perfect level the printer section. The operation has to be performed by using a centesimal level (0,02mm/m). The reference point for the level is the bar of the air bearing slide.

Attention! the level has to be placed with care on the bar, this is necessary to avoid scratches or damages of the bar itself.

Check again the level 24 hours after the installation as it could have changed, requiring an adjustment. To do that it is possible to use the air bearing slide, in the following manner:

1) Switch on the air compressor or feed the printer with air, ***absolutely do not switch the unit on!***

2) Now the air bearing slide can be moved without any efforts is needed, it is now an high precision level.

3) Handling it with care, move the slide to the centre, and check in which direction it moves, adjust the level of the printer till the slide does not move.

While processing the paper processor creates vibrations, they can be transmitted to the printer

trough the floor. To avoid the vibrations problem the paper processor is delivered with a set of
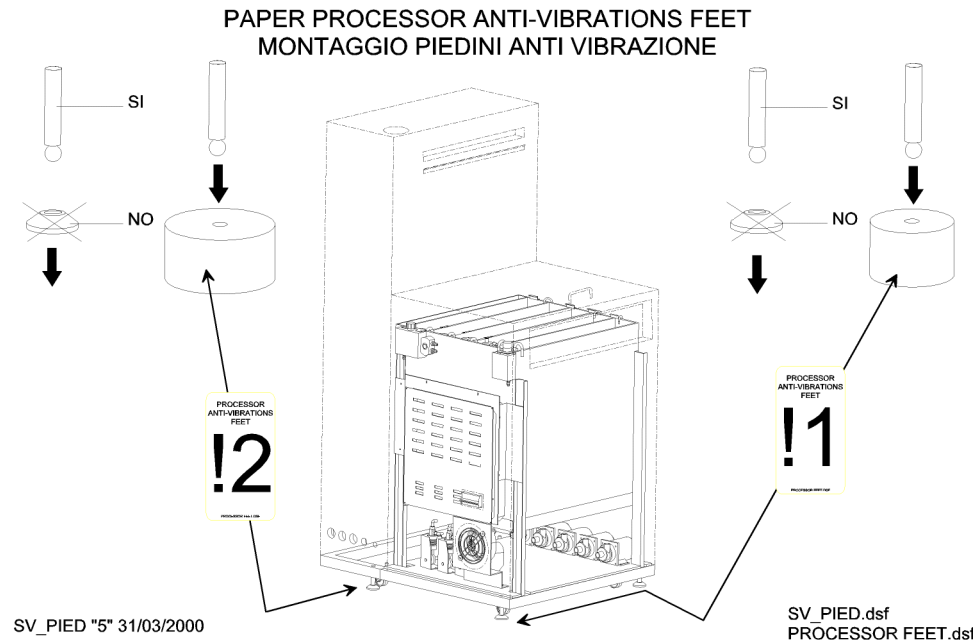
Fig.4 - Anti-vibration feet placement

anti-vibrations feet, they have to be placed during the installation as shown on fig. 4. The plastic base of the existing feet has to be removed and the rubber feet have to be placed following the reference numbers labeled on them.

> ⚠️ *Attention! The feet has different diameters depending from the weight of the processor on each corner.*

The coupling with the paper processor must be made so that the first crossover, <u>during the rotation of its rolls,</u> does not touch or brush the output deflector of the printer. The output deflector has its regulation screws, that allow wide movements to put the deflector in the right position. To help the coupling during the installation some adhesive arrows have been placed on printer and paper processor, a value is write on, indicating the distance and the difference in depth between the two units, by respecting these values the coupling is nearly perfect.

An optimal regulation is the one where the output deflector does not make contact between deflector and top or bottom roll of the first crossover. Please note that during production the paper processor could make small oscillations, and so the first crossover too; don't forget this during the coupling, give a short range of movements to the unit.

4.4 Electrical connections

The **LaserLab** equipment has its own proper overload and short circuit protections. In every case it is needed a two pole grounded socket, 16A/250V~ meeting the **IEC309** standard.

The mains supply network and the ground network must be in working order and in compliance to the laws in force.

Attention: no LaserLab component can be supplied directly from the mains. Supply every component only by the UPS unit output.

If an (optional) air compressor is present, this one MUST be connected directly to the mains network (230Vac 8A).

Start from the UPS (Uninterruptible Power Supply shown on fig. 5). Connect first the input plug (220Vac 16Amp). This because it is necessary, since the beginning, to have a good earth connection to discharge static electricity that can damage some components of the system.

4.4.1 UPS unit

Check the UPS to stay off. First of all, connect the 220VAC 16A supply plug to the mains supply.

Continuous Power Unit
Gruppo di Continuitá

220Vac 16Amp Main input
220Vac 16Amp Alimentazione

Battery switch (always ON)
Interruttore batterie (sempre ON)

220Vac output for Electronic trolley
Uscita 220Vac per carrello elettronica

220Vac output for PC table
Uscita 220Vac per tavolo PC
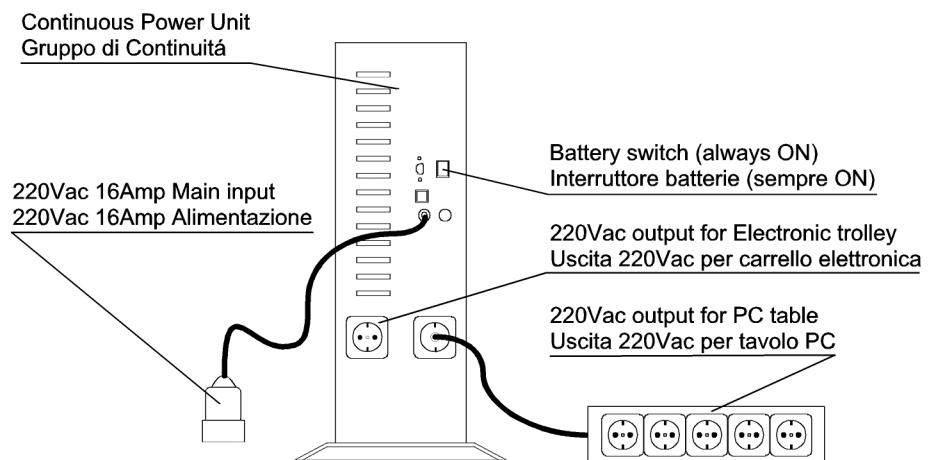
Fig.5 - UPS unit

Make the ground connection available as soon as possible, to avoid electro static discharges through sensible electronic components.

Connect the 5 sockets holder as shown in fig. 5 on page 14.

Attention: the supply input cable and the output cable of the UPS unit must be kept as separated as possible. The two cables are not to be parallel, otherwise the resulting electrical noise could affect the print quality.

See fig. 6.

NO

YES
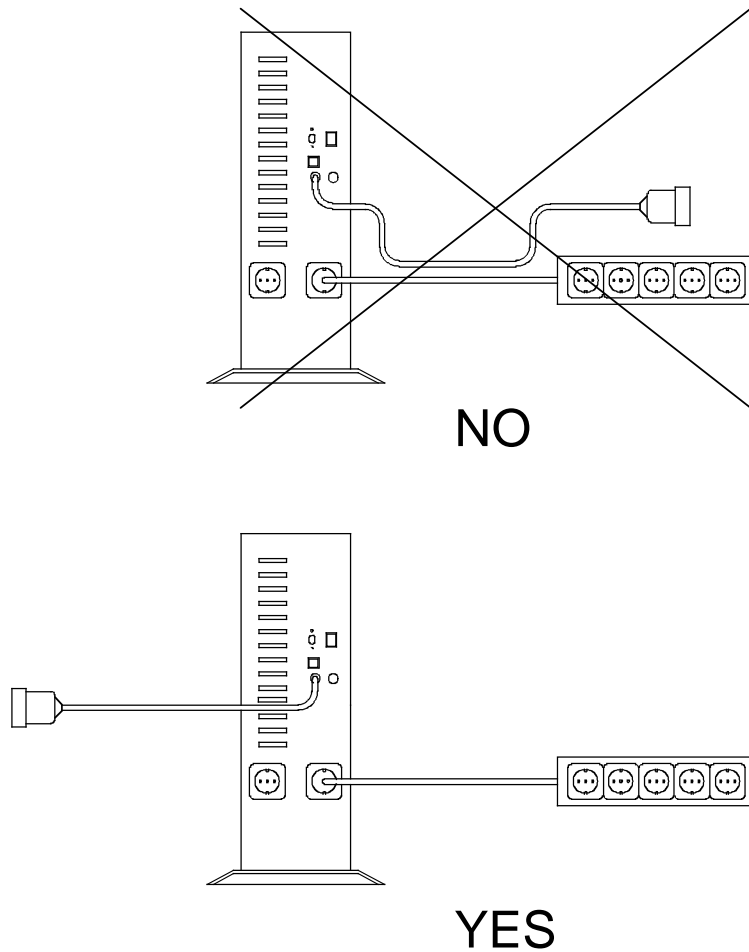
Fig.6 - Correct placement of the cables for the UPS unit

Connect now the trolley with the electronic units placed under the printer section (see fig. 7 on page 16).

4.4.2 Connection between printer and processor

Connect the **PROCESSOR** cable coming from the printer to the **PROCESSOR** connector on the processor**.**

4.4.3 Connection to the power group

The power group is placed behind the optical laser group. It shown in fig. 7. Connect the plug labeled **TO CONTINUOUS POWER UNIT** to the UPS.
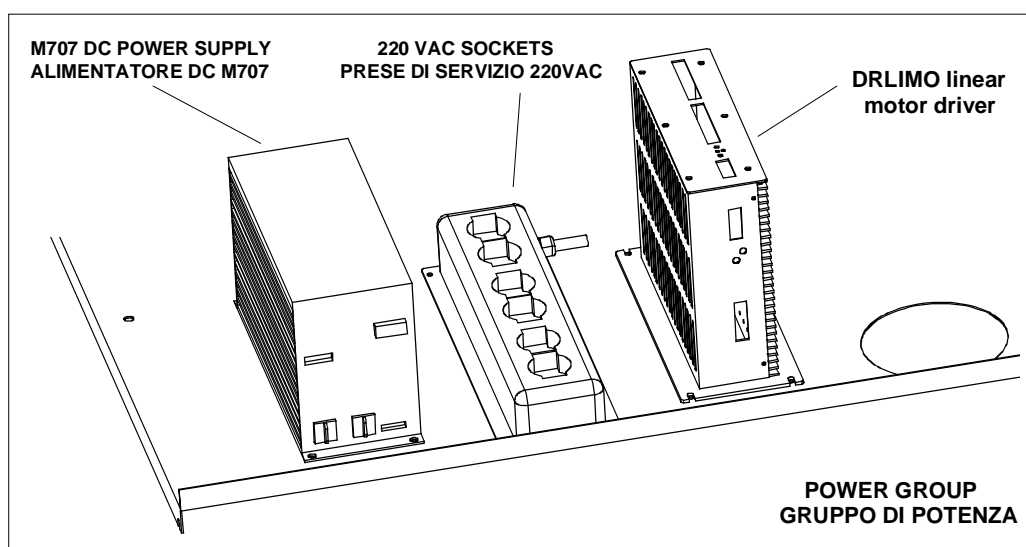
Fig.7 - Power group

Connect the cable coming from the printing section labeled **DC POWER SUPPLY** to the **M707** DC power supply.

Connect the cables coming from the printing section, labeled **CUSTOMERS inputs/outputs DIGITAL, MOTOR CONNECTION** and **POSITION ENCODER ANALOG,** to the **DRLIMO** Linear Motor Driver. Check the power switch to stay on **I** (On).

Check all the supply plugs to be connected to the **220VAC sockets** group.

Check the laser supply power switch to stay on **I** (On).

4.4.4 Fan group and air filter connections

Change now to the connection of the fans and filter box shown on fig. 8 on page 17. Connect the plug labeled **VACUUM FAN** to the corresponding socket coming from the printing section.

Connect the two tubes for air recirculation coming from the printing section.

Connect the compressed air input to the existing distribution system or to the air compressor.

The two **compressed air outputs** must be connected, one to the linear motor (sled) and the second one to the **DRLIMO** driver air input (see fig. 7 on page 16). To lock the tubes push them well into the holder.
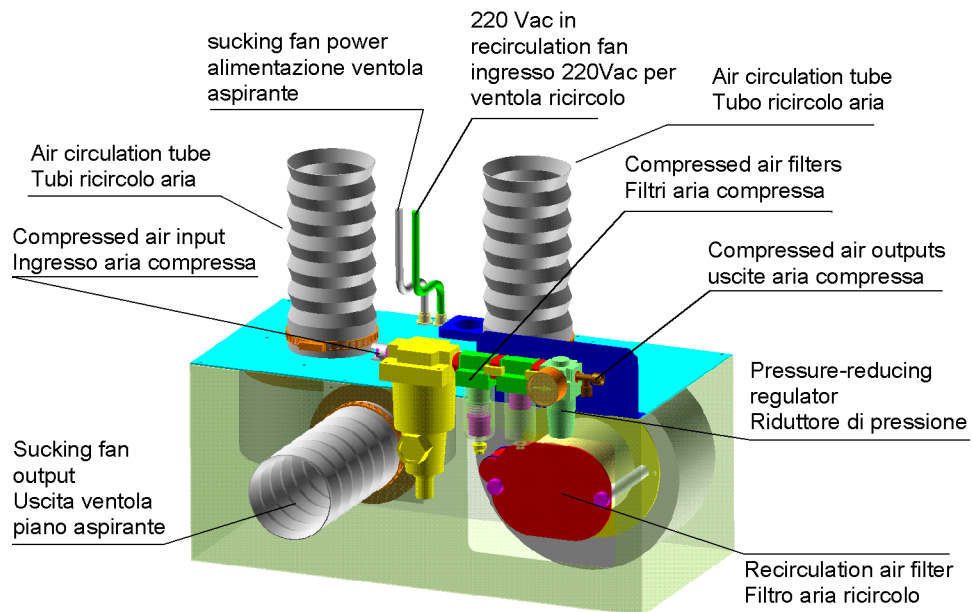
Fig.8 - Fan group

4.4.5 Connection to the personal computer

It is possible now to connect the computer and the rest of the electronic units, see fig. 9 on page 18.

Let to **0** (Off) position all the power supply switches.

Connect the four feeding cables (220Vac) to the multiple socket connected to the UPS.

Connect the mouse and computer keyboard as shown on fig. 9 on page 18.

Connect the **monitor signal** cable to the respective connectors on monitor and computer.

Connect the densitometer (**optional**) to the **COM1** PC serial port.

Connect the serial cable (coming from the printer) labeled with **COM2** PC serial port.

Connect the WRITING SYSTEM (**optional**) serial cable, labeled with **COM3**, to the **COM3** PC serial port.

Attention: the densitometer and the **WRITING SYSTEM** *are optional features.*

Consult our sales office for more information.

.
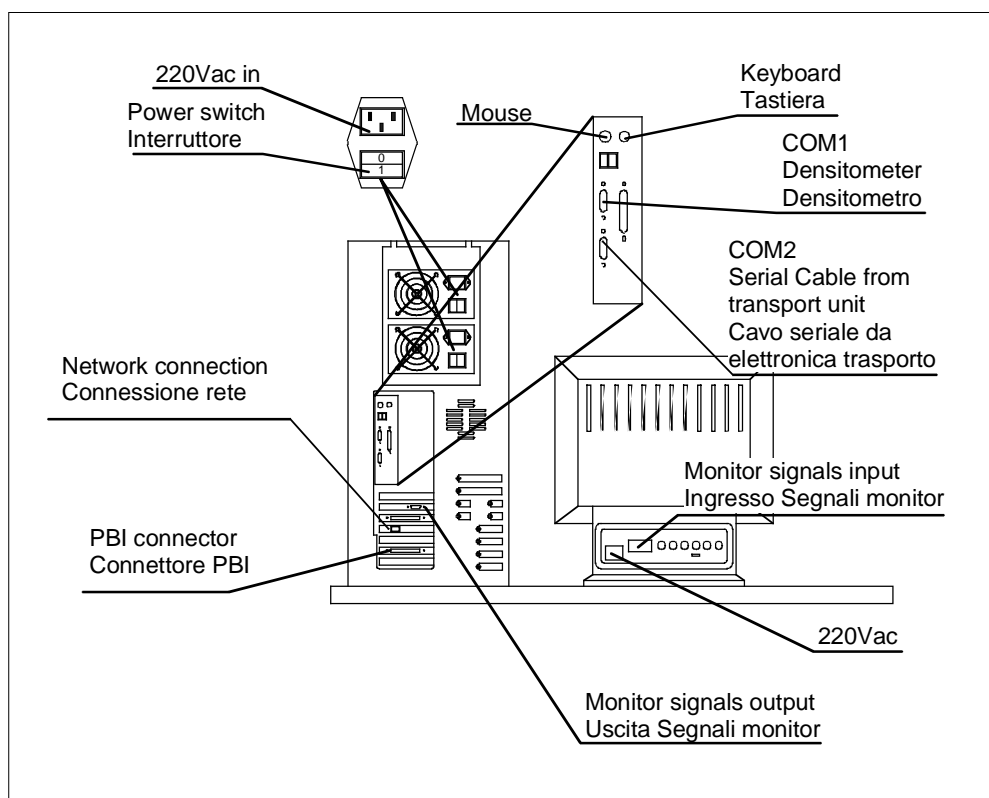
Fig.9 - Connections to the Personal Computer

Switch to **I** (On) the power switches on the two electronic units (**LMI** and modulators driver unit) and the two power supplies of the computer. Check the monitor switch to be in the **I** (On) position.

4.4.6 Connections to the laser optical group

Connect the three RGB cables coming from the **LMI** panel to the driver inputs on the modulator control panel, placed near the laser group (see fig. 10).

Bring to I position the power switches of the LMI unit (placed inside the transport section) and the modulator control panel.
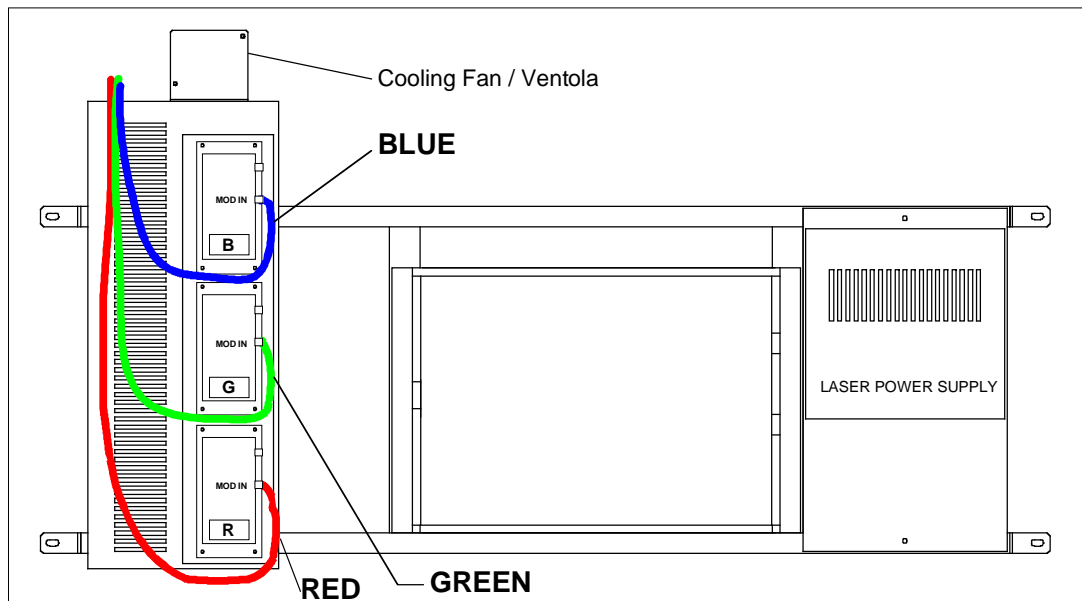
Fig.10 - Connections to the optical group

4.5 Heat dissipation

The LaserLab equipment generates heat. This heat has to be dissipated, as hot air, to keep stable the internal working temperature. There are two outputs for the hot air, they can be directed outside from the working place to avoid excessive warming up.

Attention! No hot air output has to be connected to a vacuum system, as they already have their own fans and this causes problem to the internal temperature auto regulation system.

5 Start up operation, Start/Stop sequence

5.1 Inspection before switching on

Before switching on check the following points:

- The warning signals have not been removed.

- The air tubes are in good conditions and properly connected. The air filters are in good conditions.

- The mains presence LED on the UPS is ON.

- The safety switch placed on the 220VAC sockets group is in the **ON** position.

- The two supply switch on the rear panel of the PC cabinet (see fig. 9 on page 18) are in the **ON** position.

- The monitor switch button is pressed.

5.2 Switching on with cold printer

Attention! Never touch the ON/OFF battery switch placed on the rear side of the UPS, since it cuts off the battery supply and disables the UPS.

Start the unit by pressing the **I** button on the UPS unit. If nothing happens, check that the on/off switch on the same panel stays on the ON position.

As soon the system is switched on, check:

1. The manometer pressure indication has to stay between 1.8 and 2 bar (fig. 8 on page 17).

2. The modulator control panel cooling fan to be properly connected and working (fig. 10 on page 19).

5.3 Warming up

*The laser group heating requires about **30 minutes**. During this time, the emission is unstable and the results, thus, unreliable.*

We suggest to consider this time while calculating a correct start-up time for the system.

*If the printer is coupled to the RA4 processor, it is necessary to consider the processor warm-up time too, which is about the same (**30-45 minutes**), but is much more subject to ambient temperature.*

5.4 Starting ImageLab®

After a few minutes, the Windows® working window will appear. Double click on the **ImageLab** icon (fig. 11) placed on the desktop, and the application will start.

Fig.11 - ImageLab icon

The reader is supposed to know the basic operations in the Windows® *operating system: launching programs, opening and closing folders and so on. Refer to the* Windows® *manual supplied with the equipment.*

5.5 Quitting ImageLab®

Select the top left corner of the ImageLab window as shown (fig. 12). Selecting **Close**, after all the jobs have been completed, ImageLab will quit.
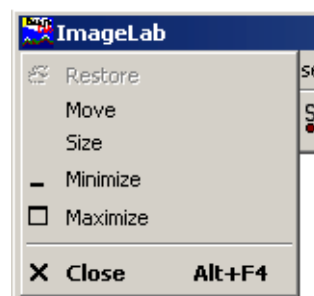
Fig.12 - Closing ImageLab

Wait for the quit procedure to finish, as indicated by the progress bar.
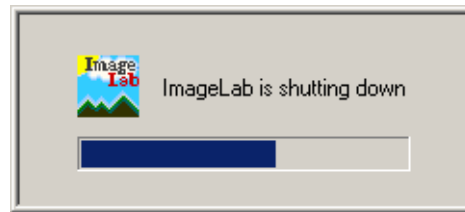
Fig.13 - Closing ImageLab

5.6 Stopping the whole equipment

To stop completely the system follow the instructions of Windows® (**Start** > **Shut down** the computer). Once it is safe to switch off the computer, it will be displayed on the monitor. At that moment, do not switch only the computer off, but the whole system from the **O** button of the continuous power supply unit (UPS).

 Attention! the system has to be switched OFF and ON, only by using the O and I buttons on the continuous power supply unit (UPS). Never switch OFF or ON any component singularly.

5.7 Mains supply failure (blackout)

In case of blackout the autonomy of **10 minutes** is guaranteed.

 Close all the jobs, and follow the instructions of section 5.5 for laser cooling down and switching off the equipment.

This procedure has also to be performed in case of mains supply instability (brown-out) or subjected to frequent blackouts.

6 Loading and printing an image

6.1 Main window and main bars: a brief description
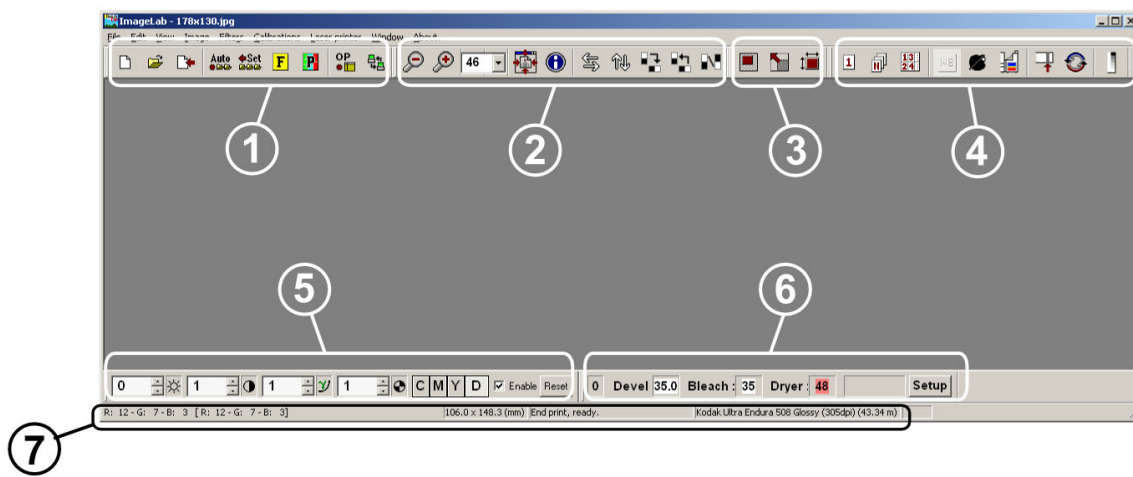
Fig.14 - ImageLab main window

After starting the program, the main window will be presented as in fig. 14. From this window every control, manipulation and correction that ImageLab allows can be accessed. The icons are designed to offer an access as quick and intuitive as possible to these options. These icons are gathered in several menu bars as described in the following:

1) **Main Bar** (section 6.1.1 on page 26).

2) **View Bar** (section 6.1.2 on page 27).

3) **Resize Bar** (section 6.1.3 on page 27).

4) **LaserLab Bar** (section 6.1.4 on page 27).

5) **Color Adjust Bar** (section 6.1.5 on page 28).

6) **Processor Status bar** (section 6.1.6 on page 29).

7) **Status Bar** (section 6.1.7 on page 29).

6.1.1 Main Bar

The **Main** Bar is shown in fig. 15.

Fig.15 - Main bar

 This group of icons is dedicated to common file operations: open, close, save. See sections 6.2 on page 30 and 6.11 on page 47 for more informations.

 This group of icons is intended for managing the printing option, including the packages and format setup, and the automatic print. From left to right:

Insert Image	manual insertion of an image.
Automatic print	This button activates the **Image Processor** dialog to access the **Autoprint** options. This function is explained at chapter 9 on page 69.
Image processor setup	This button activates the **Autoprint folder list** dialog to create and modify the Autoprint folders. See section 9.3 on page 71 for further details.
Format setup	This button activates the **Format setup** dialog to create and modify the format folders. This function is explained at section 9.6 on page 82.
Package setup	This button activates the **Packaging setup** dialog to create and modify the packages. This function is explained at section 8.2 on page 59.

 These two icons are related to the **Order Processor** options.

To have these buttons active, it is necessary to get the optional **OrderMakerMF®** installed. See the chapter 15 "Managing multiformat orders: OrderMakerMF®" on page 139 for further details.

6.1.2 View Bar

The **View Bar** is shown in fig. 16.

Fig.16 - View bar

The icons of the **View Bar** are intended to perform basic operations on the images, like viewing and zoom operations, rotating and inverting the image. These functions are explained in details in the following sections:

-         Section 6.3 "Viewing the image and image informations" on page 31.

-         Section 6.9 "Rotation and inversion" on page 43.

6.1.3 Resize Bar

The **Resize Bar** is shown in fig. 17.
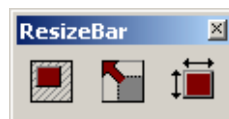
Fig.17 - Resize bar

The icons are intended to perform basic cropping and resizing operations on the image. **Resize Bar** functions are explained at section 6.8 on page 40.

6.1.4 LaserLab Bar

The **LaserLab Bar** is shown in fig. 18.

Fig.18 - LaserLab bar

Use the first three icons to launch a print, either a single one or multiple prints, or a pack of prints. For further details, see the following sections:

- Section 6.4.2 "Multiple prints" on page 33.

- Section 6.4.3 "Pack printing" on page 34.

The other icons are intended for settings of hardware or some direct command to the system.

The **Writing System** *icon is enabled only it the optional* writing system *component is mounted on the equipment.*

This button enables the **Paper box** dialog for selecting the paper box to load. See section 7.1 "Selecting paper magazine and profile" on page 51, for further details.

This button enables the **Processor status** window, showing several parameters about the status of the RA4 processor coupled to the Laserlab. For further details, please consult the processor user manual.

This button enables the **Load paper** function, useful when beginning a new roll of paper. For further, see section 7.4 "Loading Paper" on page 54.

This button, if selected, **reset**s completely the printer settings.

This button starts the paper calibration procedure. See chapter 10 "Paper calibration: daily alignment and creating new profiles" on page 93 for further details.

6.1.5 Color Adjust Bar

The **Color Adjust Bar** is shown in fig. 19.

Fig.19 - Color adjust bar

Through the icons in this bar are deceased the functions for correction in color, density, gamma and others. Every option about color correction is explained at section 6.6 "Images density and color correction" on page 37.

6.1.6 Processor Status Bar

The processor status bar is shown in fig. 20.
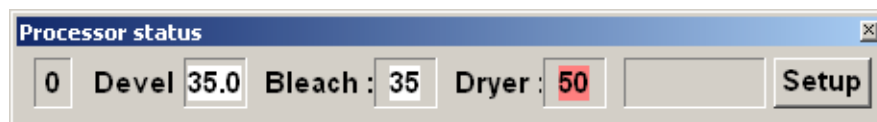
Fig.20 - Processor status bar

This window gives indications about the state of several parameters of the processor: temperature of the chemical and of the dryer. Also, it is also possible to access the processor settings through the **Setup** button.

Please consult the processor user manual.

6.1.7 Status Bar

Once an image has been opened, the Status Bar shows several image properties. The Status Bar features are shown in fig. 21.

Fig.21 - Status bar

- The **on-screen densitometer** is related to the mouse position over the opened image.

- The frame in the center gives the current **image dimensions** (in mm).

- At the right there are informations about the paper: the type of **paper loaded** and the **left paper** in the current roll.

6.2 Open file and create a new image

Open. Select the icon of the **Main Bar** shown on left. You are presented the menu shown in fig. 22 on page 30. From here it is possible to select the peripheral on which the file is placed and the file to open itself.

From the bottom of the pull-down menu it's possible to select the graphic format type of the image to open; but the graphic format recognition procedure remains automatic.
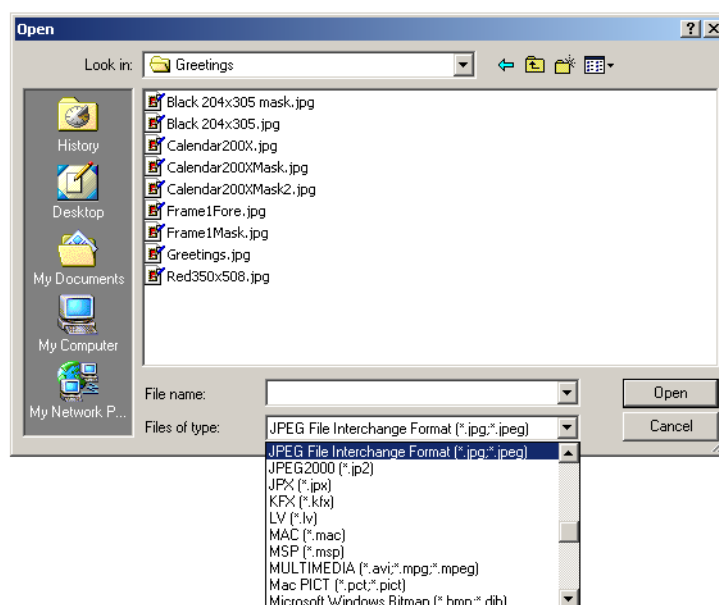
Fig.22 - Opening files

Select the image to open and click **Open**; The **Convert to profile** window appears, as shown in fig. 23. Click **OK** to accept the default options.
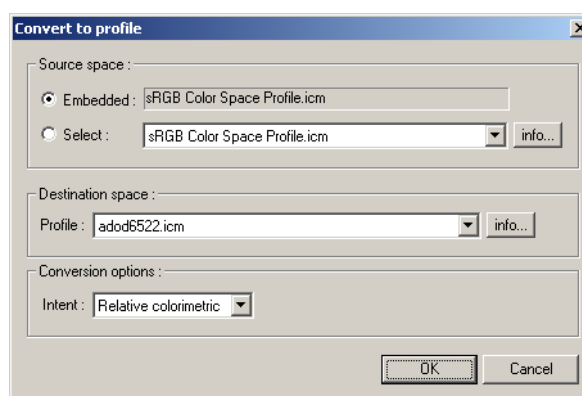
Fig.23 - Color profile selection

Color profiles management is explained at chapter 11 "The ColorMap Color Management System" on page 101.

New image. By selecting the icon shown on left (**Main** Bar) you are presented the window to create a new image (fig. 24).

Image size: is a menu that allow you to select one of the defined formats.

Width - Height (mm) Here, it is possible to type in directly the needed size, without using standard sizes.

Printer size. Sets automatically the size to the maximum allowed from the printer (width=762mm(always) Height = loaded paper)

R: G: B: or **Color** allow to define the color of the background. By using **R, G** and **B** the color can be changed manually (all R=G=B=0 means black and R=G=B=255 means white). **Color** allows to select one of the defined colors or grey level.
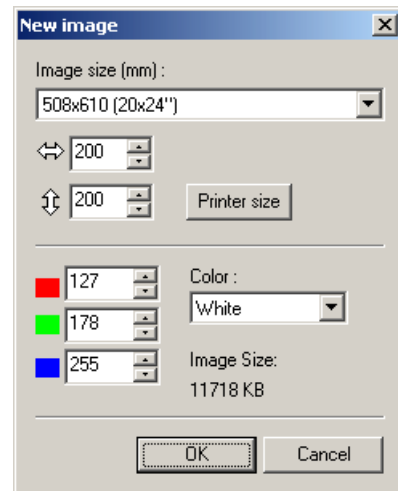
Fig.24 - New image dialog

Warning: Although it is possible to open and create more than one image in the work window, each one uses more and more of the computer's resources, up to a critical point where it will be impossible to continue. For this reason, we suggest to open only the images on which you are effectively going to use.

6.3 Viewing the image and image informations

The first part of the **View Bar** is intended for this operations (see fig. 25).

Fig.25 - View functions

Zoom out: it reduces the magnification of the image on the monitor.

Zoom in: it increases the magnification of the image on the monitor.
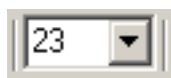
Zoom%. The box placed on the right of the two zoom keys shows the image magnification. It is possible to type any value inside the box (press ↵**ENTER** to confirm) or selecting a defined value from the corresponding pull-down menu.

Zoom fit: automatically fits the image to the entire screen.

Informations about the image. Select this button to let an image information dialog appear (fig. 26).
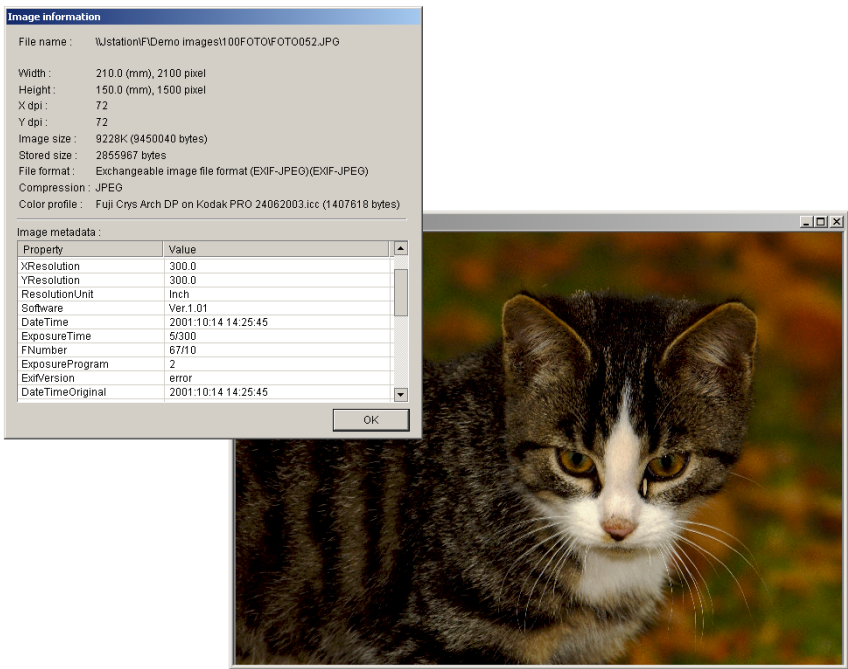
Fig.26 - Image properties

6.4 Image printing

6.4.1 Printing the current image

Print now! Select this button from the **LaserLab Bar**.

Or select

the **Laser Printer** > **Print Now!**

from the main menu (see fig. 27) or the function key **F12**: the LaserLab will take the image as shown and send it to the printer.

During exposure on the status bar (top of image) the message: **@ in progress #1** will be displayed.
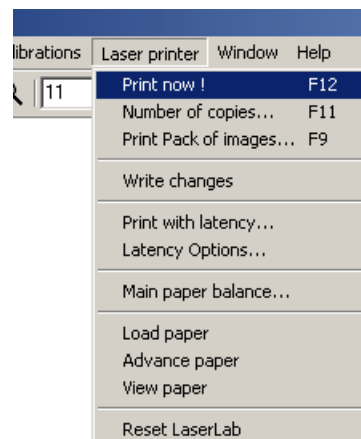
Fig.27 - Laser printer menu

It is possible to select a new image during an exposure and give it the command **Print now** *or* **F12**. *In this case the message* **Waiting** *is displayed on the status bar till the previous exposure is completed.*

6.4.2 Multiple prints

Print copies. If the current image must be printed in more than one copy, select this button from the **LaserLab Bar**.

Or select

Laser Printer > **Number of copies...**

from the sub menu. The **Select number of repetitions** window shown in fig. 28 will appear. Input the quantity of prints that are required, and select **OK** to launch the print cycle.

Fig.28 - Multiple prints

Attention. *This function is intended to print* **one single image on every sheet**. *This could cause waste of paper if image dimensions do not match exactly the paper band in use.*

To pack the copies in a single sheet, see section 6.4.3 "Pack printing" on page 34.

6.4.3 Pack printing

Pack printing is the repetition of the same print. All the pictures are placed on a same sheet instead of using a sheet for each one.

Attention: this function will work only if the image format is small enough to fit one or more times in the selected format of the sheet.

To use it, select the **Print pack of images** button placed on the **LaserLab Ba**r.

Or select

Laser Printer > **Print Pack of images...**

or the function key **F9**: the **Print pack repetitions** dialog (fig. 29) appears.
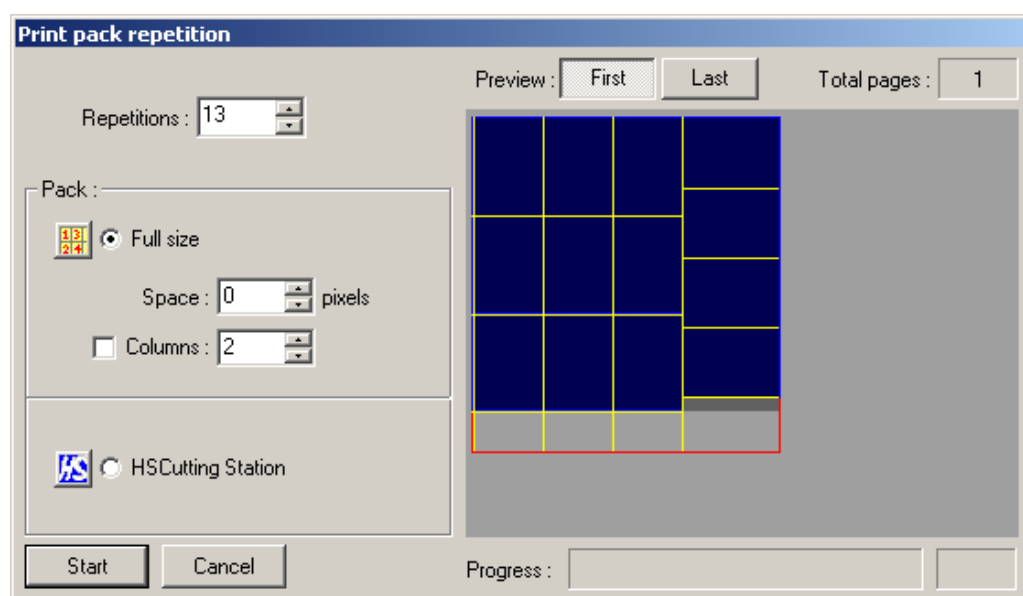
Fig.29 - Print pack repetition dialog

The area on the right represent the layout of the pack. The red rectangle is the total sheet area, while in blue is indicated the used area. The yellow lines represent the separation between the copies.

For great number of repetitions, not all the copies will be shown in that area.

The number of pages is shown in the **Total pages** field, at the top right corner of the window. Select **First** to see the layout of the first page (being the same of all the others, except for the last one). Select **Last** to see the layout of the last page.

The available options are:

Repetition   Sets the number of copies in the pack. Modify the number through the arrow buttons or the mouse wheel. The print layout will be adjusted as well, and the result will be immediately visible in the window.

Full size   As many images as possible are placed on the maximum transportable format. In this mode it is allowed to eventually change the orientation of some copies to minimize the waste of paper. For example, in fig. 29 the last two copies on the left are rotated of 90°.

Cutmarks   Adds the cutmarks between copies to the layout (see 7.5 "Programming cut bars" on page 26).

Space   Selects the space in pixels (1pixel = 1/10mm) between the copies.

Columns   Use this option to limit the maximum sheet length to a fixed number of columns.

HSCutting Station   Fits the layout to be managed by the Polielettronica HS Cutting Station (see chapter 14 "HS Cutting Station" on page 117). In that case all the copies have the same orientation.

Select **Start** to launch the print cycle.

6.5 Creating a photo index (index print)

It is possible to generate automatically an index of the images contained in a folder or an index of some selected images.

To start this process it is necessary to have an image shown on the window of ImageLab.

The image is needed to define the size of the index and to give, if it is needed, a background to the index. If there are not image available or you aren't able to create a new one see 6.2 "Open file and create a new image" on page 30.

Select the menu items

Image > Generate inde<u>x</u>...

or the function key **F2**, the **Open** window (fig. 22 on page 30) window will appear. It is possible to select the path, the folder that contains the images and then all the images to be included in the index.

Select now **Open**, the **Generate index** window will appear as shown in fig. 30.
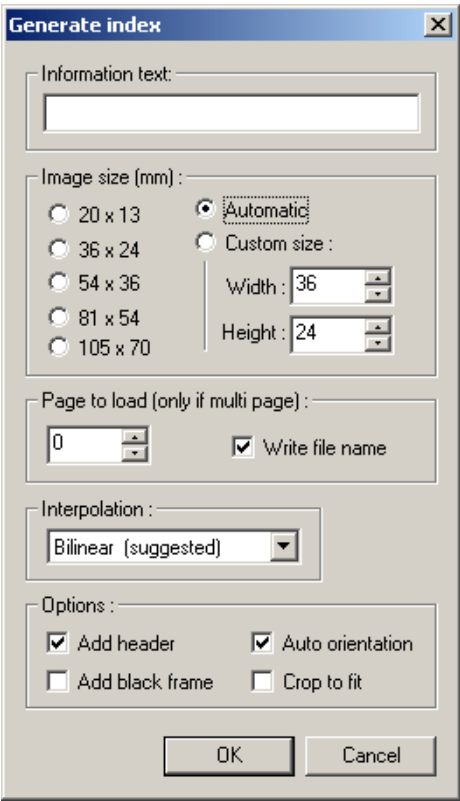
Fig.30 - Creating photo indexes

On it the following options are available:

Information text	Gives the text contained in the index header. Select the **Add header** box to use this function.
Image size	Allows to select one of the defined sizes. We suggest to use **Automatic**, in this way the size of the icons is the maximum allowed on the index.

Attention! By using a fixed defined size not all the icons could be arranged on the index area.

Page to load (only if multipage):	Chooses which page of the image load and open to generate the index (if the source is a Photo CD or similar).
Write file name	Add on bottom of the generated icon the name of the source file.
Interpolation:	Selection of the interpulation method for the thumbnails.
Add header	Enables the title presence on top of the index, by default the text is the date, if an extra description is needed write it in the single

line window named **Information text.**

Auto orientation	Turns the image to match it with the frame of the index. **The frame of the index is always horizontal**.
Add black frame	Adds a black frame around each icon of the index, to make it evidence.
Crop to fit	adapts the image to the size of the index icon, eventually cropping it.

6.6 Images density and color correction

The **ImageLab** software allows to correct an image before printing it. This correction is real-time shown on the monitor. The **Color Adjust** bar, shown in fig. 31, is placed at the bottom left of the monitor.

Fig.31 - Color Adjust bar

Available commands allow to modify (from left to right in the figure):

Brightness;

Contrast;

Gamma;

Cross-**contrast**;

To set the desired values use the arrows placed at the right of each box, or select the box and rotate the mouse middle wheel, or just type directly the value in the box. The correction is in density if the **DENS** button is selected. It is possible to correct the single color by selecting one of the **C**, **M**, **Y** buttons.

For example, load an image and set to **0.85** the cross contrast and to **0.95** the γ value. The image saturation will immediately increase.

To view the modification the **Enable** button has to be selected. Deselect the same to view the original image. To delete all the changes select the **Reset** button.

The modifications will be brought only to the printed image, not on the original source one.

6.6.1 Image menu correction options

Other correction options are available in the **Image** menu. Select it from the main menu bar, as shown in fig. 32.

Convert to grayscale: converts the current image to B&W (grayscale).

Color brightness: changes the color saturation of the current image to reach more (or less, if desired) brilliant colors. It is possible to introduce a value from **-30** to **100**. A negative number means the saturation to decrease, a positive number increases the saturation.

Convert to wide RGB: applies to the current image a color profile in order to have the monitor colors on the printing paper.

Convert with ColorMap: applies the ColorMap procedure to the current image.

Automatic image correction: starts an automatic correction procedure.
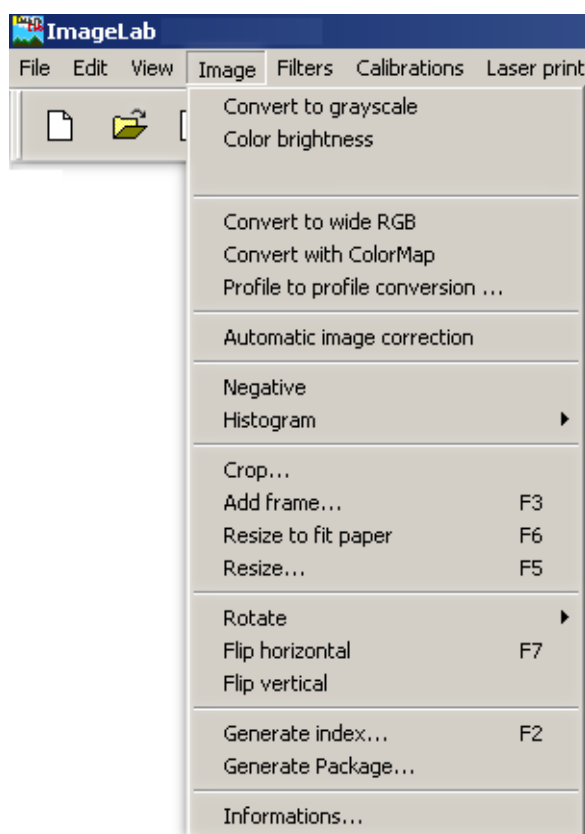
Fig.32 - Image menu

*The **Convert with color map** and **Profile to profile conversion** options are about the color profile management.*

See chapter 11 "The ColorMap Color Management System" on page 101, for further details.

*Attention: all the corrections above described are seen on the prints but **they are not saved on the original image file**. To save the changes, use the*

Edit > Apply changes *or the*

File > **Save**

commands.

6.7 Setting up a correction profile

The correction procedure of the section 6.6 works only on a single image. If the same correction is required on more images, it is possible to define a correction profile an apply it on them all.

Once the desired correction are applied on the current image (through the **Color adjust** bar) to apply the same correction to the next images to be opened, select

Laser printer > Main paper balance

from the main menu. The **Output color balance** window appears, as shown in Fig.33.
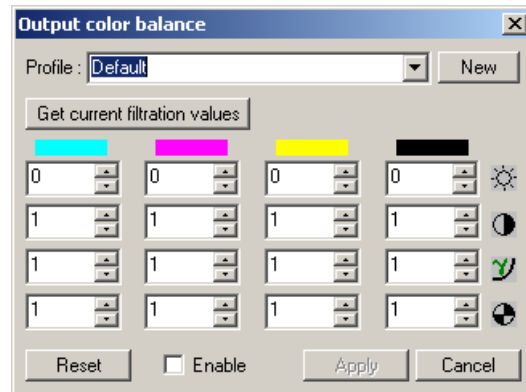
Fig.33 - Output color balance

*Select the **Get current filtration values** button: the previous image correction values will be automatically applied to the proper boxes.*

To restore the original settings, select **Reset**. When the **Enable** box and the **Apply** button are selected, the window can be closed. All the next images will be printed (both in manual and in Autoprint mode) with the defined corrections.

To disable the correction select again

Laser printer > Main paper balance.

In the **Output color balance** window deselect the **Enable** box and confirm with **Apply**.

It is possible to save the correction profiles. Select the **New** button and type the profile name in the save window.

To recall a previously defined profile just choose it from the **Profile** pull-down menu.

*Attention: the described correction procedure **can't be used** for balancing a wrong paper calibration.*

See chapter 10 "Paper calibration: daily alignment and creating new profiles" on page 93.

Attention: This option, if enabled, is automatically applied to every Autoprint folder. See chapter 9 "Auto Print and formats" on page 69, for more details.

We suggest to keep this option disabled when it is not used.

6.8 Resizing and basic manipulation (Resize Bar)

In most cases, a newly loaded image is not in the desired printing size and a cropping of the original image could be required. After loading a file, its format is shown in the center of the bar at the bottom of the window (**Status Bar**).

In this case (shown on fig. 34) the format is 177,8 mm of width (horizontal size) and 127 for height (vertical size).

| 177.8 x 127.0 (mm) |
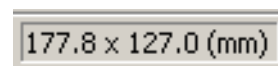
Fig.34 - Image dimensions

The resizing operations are available from the **Resize Bar** (shown in fig. 35), the three buttons are **Crop Selection**, **Resize to Fit Paper** and **Resize Image.**
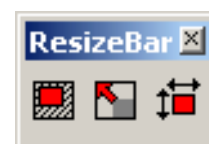
Fig.35 - Resize Bar

6.8.1 Cropping

Crop Selection   Allows to select the section of the image that is needed for the print.

Select the first button and the **Crop size** window shown on fig. 36 will appear.

The **Choose size from format** menu shows the defined available sizes. The items **Width** (horizontal arrows) and **Height** (vertical arrows) allow to insert manually the needed crop size. The cropping window will be shown as a shaded line frame. The cropping window follows the movement of the mouse. To change the size of the cropping frame torn the mouse wheel (middle button of the mouse), to increase the speed of the mouse wheel hold the **Ctrl** key.
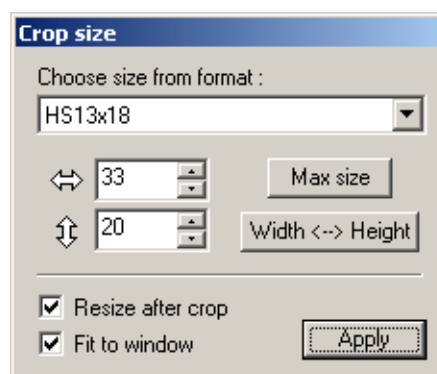
Fig.36 - Crop size dialog

When the left button of the mouse will be pressed, the section of the image inside the frame will be saved, and the external part will be deleted.

The cropping operation is shown in fig. 37.
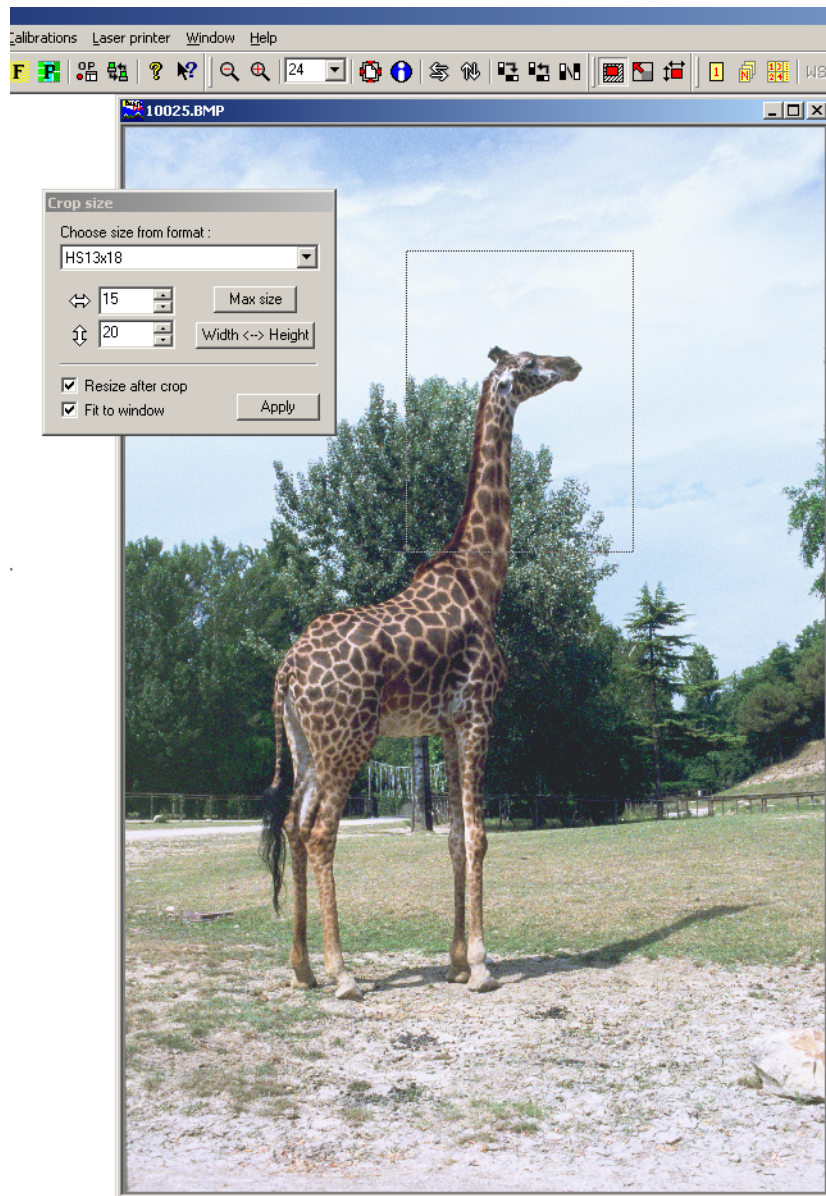
Fig.37 - Cropping example

The option **Resize after crop**, when selected, resize automatically the selected image after the crop to the size selected on the **Crop size** window. The option **Fit to window** adapts the size of the cropping frame to show it fully on the image.

To avoid the operation select the **Crop Selection** button again.

6.8.2 Resizing

Resize to fit paper   The second button of the **Resize bar**, resizes automatically the image to the maximum allowed size depending from the paper width in use.

The resize takes effect without making any clipping of the original image.

The resize operation never exceed the paper size or the maximum length of 762mm (30").

Resize image   The third button of the **Resize bar** it is used to resize the full image to any size.

Press the third button to let the **Resize image** dialog appear (fig. 38).

The **Destination size** menu allows to select a defined size (see 9.6 "Modifying and creating formats" on page 82).

Width (horizontal arrows) and **Height** (vertical arrows) are updated automatically if a predefined format is selected; but they can also be modified freely.

The **Width<->Height** option switches the height with the width (vertical or horizontal format) if the image orientation does not match the printing orientation.

The **Max size** option sets the values to the maximum print size that the current loaded paper format allows.

The **Cut frame (mm)** option eliminates a frame along the perimeter of the image after the resizing, useful if the acquiring system has added a undesired black frame.

Fig.38 - Resize image dialog

The **Crop to exactly fit** option adapts the image (by cut) to the printing format. E.g.: let's suppose to have a square image which needs to be printed on a 20x30. If this option is not selected, the result from a resize will be a 20x20; if it is selected, a 20x30 will be produced, although the top and bottom parts of the images will be cut to adapt the image to a rectangular format.

The **Border (mm)** option, generates automatically a white border (frame) around the image of the selected thickness, the total size of the image including frame does not change.

The **Fill with white** option, works in case the **Crop to fit** option is not selected. It force the final
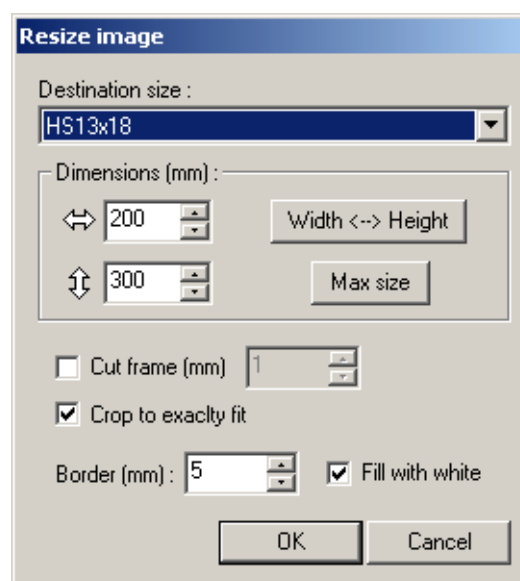
size of the image by filling the empty space with white. Suppose to have in origin a square image and the needed size is 30x45 (12x18"); the final result will be a 30x45 where the image is a 30x30, on head and tail will be added white spaces till the length of 45 is reached.

6.9 Rotation and inversion

The **View bar** contains five icons intended for these operations (fig. 39). The first two icons do a specular inversion of the image; the remaining three do, in order: clockwise 90° rotation, counterclockwise 90° rotation, and 180° rotation.

Fig.39 - Rotation and inversion options

Flip Horizontally. Specular (horizontal) inversion of the image.

Flip Vertically. Specular (vertical) inversion of the image.

Rotate 90° clockwise.

Rotate 90° counterclockwise.

Rotate 180°.

If it is required to rotate the image of a different angle, select

Image > **Rotate** > **any angle**

The **Rotation** window shown in fig. 40 will appear. In **rotation angle**, insert the desired angle of rotation (from **0** to **360**); then, select one of the two available rotation options.
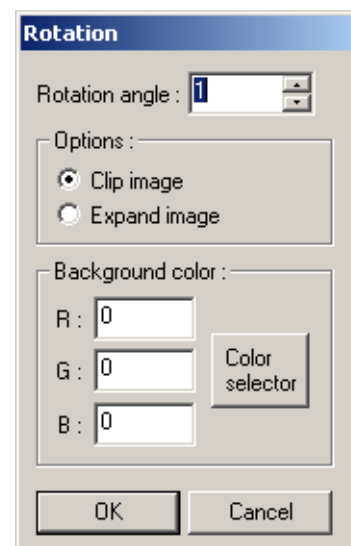
Fig.40 - Rotation dialog

Fig.41 - Clip image

The **Clip image** option rotates the image without changing the graphic format, meaning that the corner will be cut as shown on fig. 41. This way the printing format will remain the same as in origin.

The **Expand image** option rotates the image modifying automatically its format, so that no corner is cut (see fig. 42). Of course, the printing format will be greater than the previous one; you can see it on the window's bottom bar (see fig. 34 on page 40).

Fig.42 - Expand image

Background color. Image rotation usually leaves some free space (colored in black in fig. 42 and fig. 44). Background color can be selected by acting on the **R**, **G**, **B** boxes or pressing the **Color selector** button.

6.10 Filters

Attention: the functions described in this section are available on most image processing commercial programs. For a better description of the filtering functions, please consult your software user manual.

To view all the available filters, select the **Filters** menu from the main menu bar of the Image-Lab window, as shown in fig. 43.
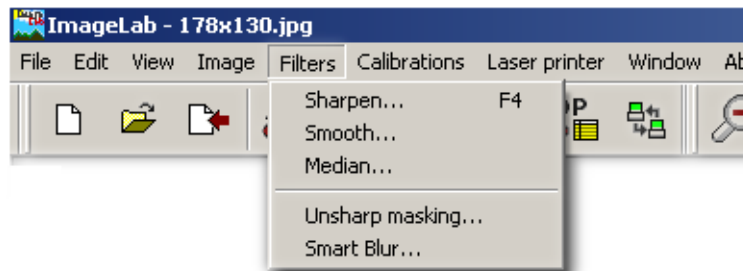
Fig.43 - Filters menu

The following functions are available:

Sharpen. Usually, the images acquired in digital systems require a detail sharpening. This is particularly necessary if the image needs to be or has already been interpolated through change of format or resizing. The sharpen effect can be selected for up to seven levels; we suggest to run some tests to familiarize better with this function. To activate this function, select the

Filters > **Sharpen**

menu item or the function key **F4**: the window shown on fig. 44 will appear, inside of which it is possible to run and select the depth of the sharpening.
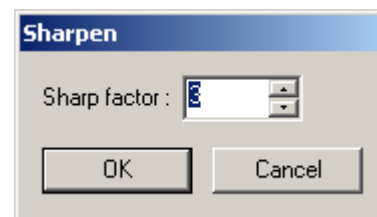
Fig.44 - Sharpen dialog

We suggest to make several tests on different images, to take confidence with this function and select the best sharpen level that meets your request

Smooth. The Smoothing parameters window is shown in fig. 45. Available values for the Smooth factor parameter are 1 to 4.
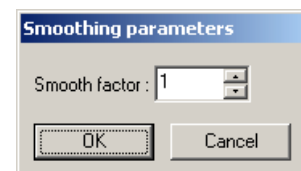
Fig.45 - Smoothing parameters dialog

Median. The Median filter window is shown in fig. 46. It is possible to set the dimensions (Width and Height) of the filter matrix.
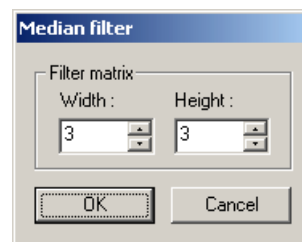
Fig.46 - Median filter dialog

Unsharp Mask. Selecting this item, the **Sharpen options** window appears (fig. 47).
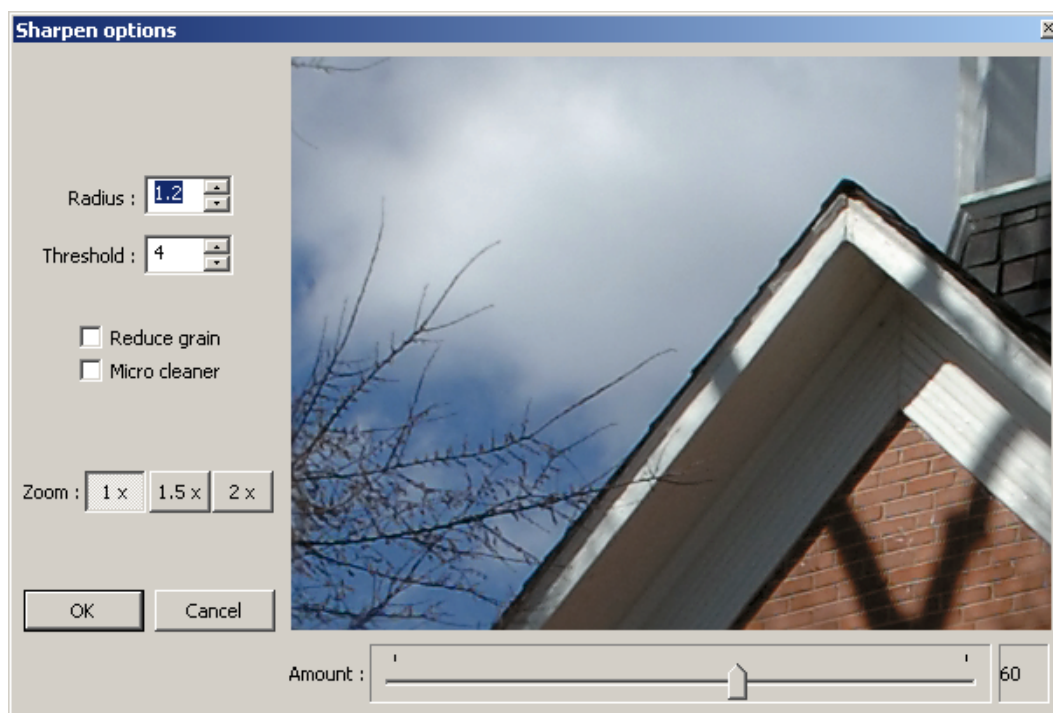
Fig.47 - Sharpen options dialog

In this window it is possible to preview the effect of the procedure on the image.

Panning the image. Place the mouse pointer on the frame and keep pressed the mouse left button. The pointer arrow becomes an hand and allows to pan the image.

When the pointer becomes an hand, the frame shows the image as it is, without the sharpen effect. When the left button is released, the sharpen comes active again. This is useful to compare images with and without the sharpen.

For a better comparison, choose the **Zoom** between the three values available (**1x**, **1.5x**, **2x**).

The available parameters are:

Radius	It gives the dimensions of the area around the "borders" to be sharpened. This parameter should not be kept too high to avoid the presences of halos.
Threshold	It gives the "difference" (in color) between pixels to be considered a "border" inside the image. Keeping this parameter near to zero makes the sharpen more visible, but the risk is to emphasize the negative grain.
Reduce grain **Micro cleaner**	Sharpening can cause the emphasizing of grain and micro defects. Use these options to reduce this effect.

Suggested values: **Radius=0.9**, **Threshold=8**.

6.11 Saving and closing an image

ImageLab is strictly oriented towards image printing, not image altering, as more suitable programs already exist in commerce.

For this reason, when an image is closed the user won't be prompted to save any changes made, and the image will be closed without modifying the original no matter what operations have been executed during work.

Any modification can be saved by selecting **Apply** in **Edit** menu then the disk icon or the **Save** command from the **File** menu, or press the button **Save** on the **Main** Bar shown on the left.

To simply close an image, click on the X button on the top-right corner of the window containing the image.

6.12 Preferences configuration

Select the menu item

File > **Preferences > General**...

The setting window for the preferences will appear (fig. 48).

The item **Configuration folder:** allows to select the working folder to save the setting of the packages (see chapter 8 "Package and School printing" on page 59). The **Browse...** button allows to select the path where the folder is placed.

The item **Resize to fit interpulation method:** allows to select the method to be used when the **Crop to fit** and **Crop selection** options are selected (6.8 "Resizing and basic manipulation (Resize Bar)" on page 40).

Two different options are available: when reducing or enlarging the image.
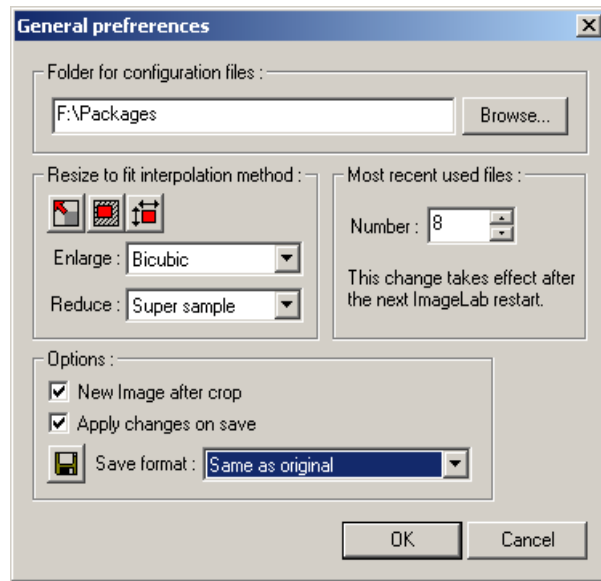
Fig.48 - General preferences dialog

Please note that the most accurate interpolation methods (like the bicubic) are also the slowest ones to be accomplished. On the other hand, fast methods like the linear are expected to be the least accurate ones.

The item **Most recent used files:** allows to select the number of recent used files that will be shown in the **File** menu item.

The item **Options: New Image after crop** activates the function generating a new image, after a Crop selection operation, without changing the original one. Without this option activated the original image will be modified.

6.13 Function Keys

List of the most important operations direct available from the function keys.

F1	Help
F2	Index (generates a photo index)
F3	Add frame (add a colored frame)
F4	Sharp (contrast mask filter)
F5	Resize (resize to a free size)
F6	Resize to fit paper (resize on loaded band width)
F7	Flip horizontal (reflects the image horizontally)
F8	Rot 90° cw (rotates the image 90° clockwise)
F9	Print pack (print a package of the same image)
F10	File (opens the File menu of ImageLab)
F11	Print number (repeats the print of the current image)
F12	Print now (prints the current image)

7 Paper loading and management

7.1 Selecting paper magazine and profile

ImageLab can manage more than one paper magazine, memorizing the paper type loaded and the quantity left in each magazine. Select the **Paper box** button on the **LaserLab Bar**.

Or select:

Calibration > Paper box

The **Paper box** window of fig. 49 appears.

Select the desired magazine (from 1 to 8)

Set in **Roll length** the length (in meters) of the roll to load.

Select from the **Paper Width** menu the width of the paper to load.

Select from the **Paper profile** menu the name of the profile corresponding to the paper type which is going to be used.
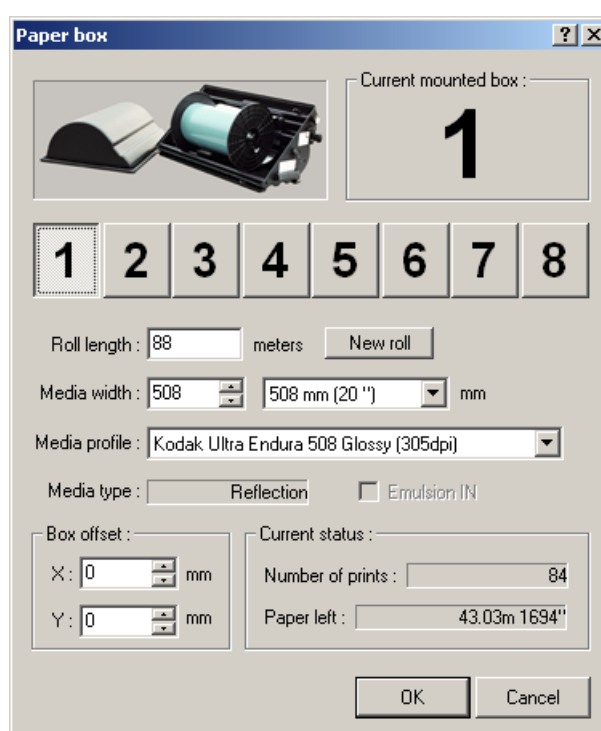
Fig.49 - Paper box dialog

Warning! The profile selected here is what the **LaserLab** *will actually use to print!*

Select the **New roll** command ONLY if a new roll is about to be loaded; a confirmation request will appear, select **Yes** there. Exit, and return to the main window.

Insert the paper magazine in the LaserLab, hook and close the panel, then select **Laser lab > Load** menu of the main window. Confirmation will be requested: select **Yes**. (See also 7.4 "Loading Paper" on page 54).

7.2 Centering and Aligning images

After a mechanical or electronic service, it might happen that prints have a white border on them, or the image is not perfectly centered on the paper.

Select

Calibrations > **Transport**...

from the main menu bar.

To correct the centering, use the **Image centering (mm)** parameters on the **Transport system**
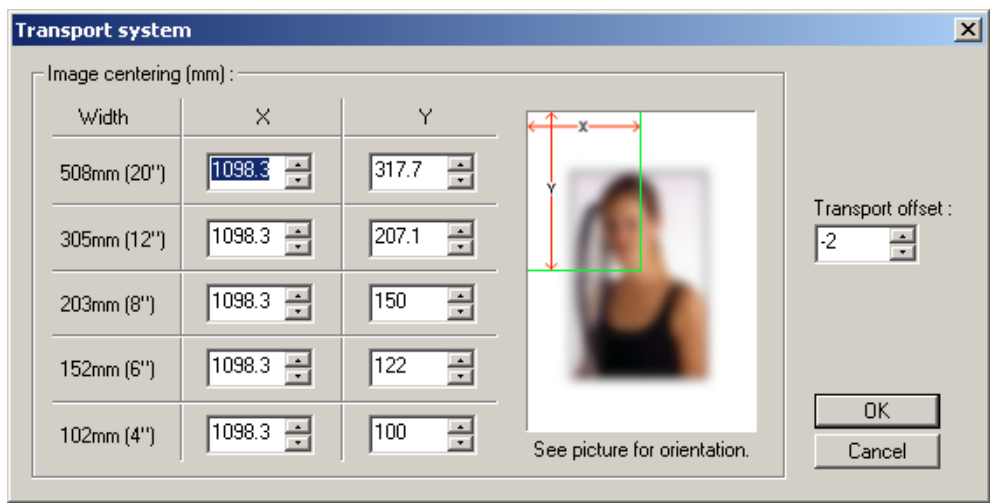
Fig.50 - Transport system dialog

window shown in fig. 50.

The window features a table (**Image centering**); each row represents a different paper band.

Attention: depending on your printer model, only the printable paper bands will be available.

The **first row** is for paper widths from 306 to 508 mm, identified with **Width 508mm (20")**

The **second row** is for paper widths from 204 to 305 mm, identified with **Width 305mm (12")**

The **third row** is for paper width from 153 to 203 mm, identified with **Width 203mm (8")**

The **fourth row** is for paper width from 103 to 152 mm, identified with **Width 152mm (6")**

The **fifth row** is for paper width equal or below 102 mm, identified with **Width 102mm (4")**

The **X** and **Y** values are referred to the sample image shown in the window. Confront the printed images and measure of how many millimeters it must be centered horizontally (**X**) or vertically (**Y**). Increase **X** (**Y**) to move the image right (down), decrease **X** (**Y**) to move it left (up). Note

that the parameter **X** is common for the all the bands (20",12",8" 6" and 4"), while **Y** can be modified independently for each band.

Attention: the above mentioned parameters are general, i.e. they modify the setting of the whole printer and on every paper setting.

7.2.1 Transport offset parameters

Once the image is centered, it might be possible to see white borders on the prints, due to positioning tolerance. In this case just set to **-1** the **Transport offset** parameter in the **Transport system** window of fig. 50. This ensures the copy to be always 1 mm shorter than the image, always covering the format.

If the parameter is set to positive values the paper results always longer than the image.

Attention: the above mentioned parameters are general, i.e. they modify the setting of the whole printer and on every paper setting.

7.3 Fine centering and alignment due to paper box position

It is possible for some little alignment error to be seen only on a specific paper box.
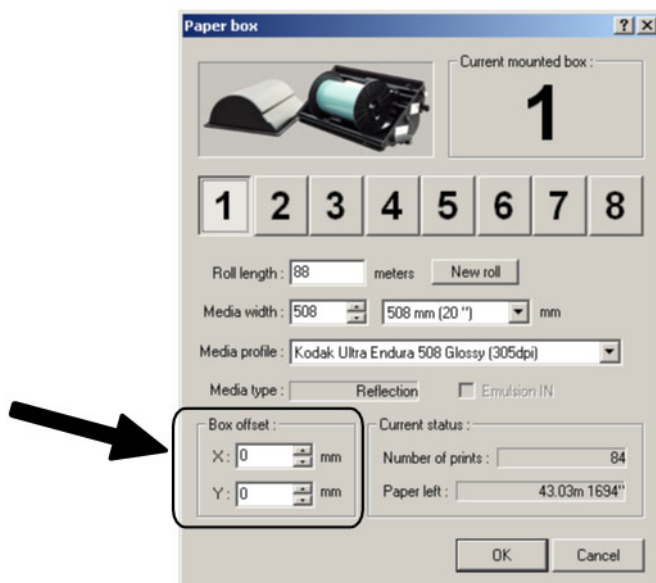
When it is necessary to correct a little gap in the centering, due to the paper box, select

Calibrations > **Paper box**...

The **Paper box** window shown in fig. 51 will appear. Set the **Box offset(mm):** The correction system is the same of the one described in 7.2, but it is related only with the paper box in use.

Fig.51 - Box offset

Every box has its own regulation which is independent from the others.

As described in 7.2, increase X (Y) to move the image right (down), decrease X (Y) to move it left (up).

7.4 Loading Paper

7.4.1 LaserLab 50 (20") and LaserLab 76 (30")

Warning: the LaserLab 50 (20")can work only if the paper roll is winded with the emulsion on the outer side.

The use of rolls winded with emulsion on the inner side causes transport problems; the aspiration system is unable to sustain and transport the paper.

Please ensure that Your supplier can procure the rolls winded the right way.

LaserLab 76 (30") *can work with rolls winded with emulsion both inside and outside* **(only for 76 (30") band)**.

See 13.2 "Managing rolls winded with emulsion inside (LaserLab 30")" on page 114 for further informations.

LaserLab 76 (30") can work with 50 (20") and 76 (30") paper boxes. The box type must be selected before inserting it.
See 13.1 "Using the 50 (20") paper box on the LaserLab 76 (30")" on page 113.

Attention: the loading of the paper roll inside the box must be performed in the darkroom.

The box components are described above (see fig. 52 on page 55):

1.   Stepper flange lever.

2   Paper roll flange

3   Paper guides.

4   Stopper lever for locking paper passage.

5   Transport lower roller.

6   Transport upper roller.

7   Opening-locking lever for paper passage.

8   Manual advancement-rewinding knob.

9   Transport roller fitting in lever.

10   Paper guides adjusting knob.

11   Take-up pulley.

To load the paper proceed as follows (see fig. 52):
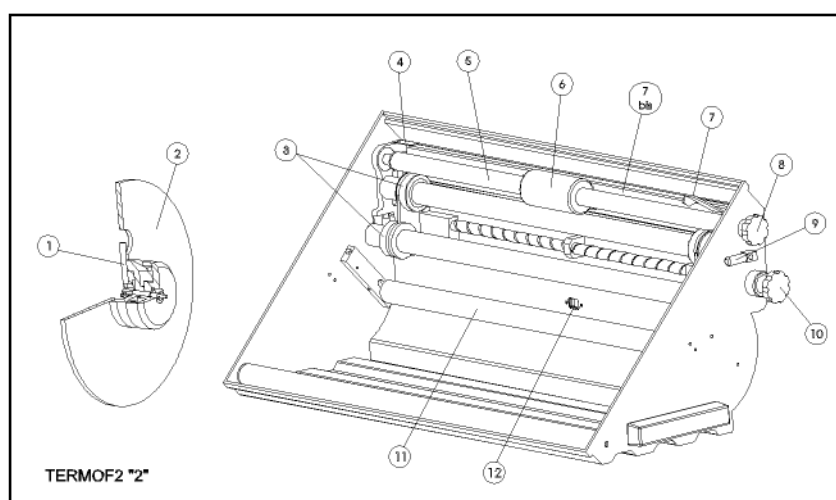
Fig.52 - Paper box for LaserLab 50 (20") and 76 (30")

1) Opening the two side hooks, remove the cover panel; then, rotating the handle (fig. 52 nr. **10**) widen the paper guides well beyond the actual width of the paper to be loaded.

2) Lift the lever at the side of the roll-holding flanges (fig. 52 nr.**1**). In a darkroom, insert the flanges directly on the roll, then press on the relative small lever to block the flanges themselves.

3) Insert the roll in the magazine, rotate the handle (fig. 52 nr.**10**) to close the roll's paper guides (fig. 52 nr.**3**).

> ⚠ ***Warning: Do not exercise excessive force on the guides regulation handle; if it is too hard to move yet the roll isn't still perfectly in place, rotate the roll while turning the handle.***

4) After the regulation is completed, rotate the handle of a ¼ of a complete turn in the opposite direction, so that the roll can turn freely.

5) Open the guillotine latch of the paper slit (fig. 52 nr.**7 bis**) pulling the lever to the right (fig. 52 nr.**7**). The lever can be locked in this position by pressing on the smaller lever (fig. 52 nr.**4**) to the left.

6) Let the paper pass below the tenser roll (fig. 52 nr.**11**) and between the transport roll and counter roll.

7) Let the paper exit from the magazine slit by rotating the transport handle. Take note that the paper shouldn't get out of the magazine for more than 1 cm.

8) Close the paper slit by pulling the lever (fig. 52, nr.**7**) fully to the right then releasing; replace the cover, locking the two lateral hooks: if these hooks seem too hard to close, the cover is not correctly positioned.

9) Insert the magazine on the sled inside the printer, press fully until the locking hook engages.

10) Move the lever (fig. 52 nr.**9**) on the box in loading position, then, rotating the handle (fig. 52 nr.**8**) counterclockwise, bring the paper to the transport roll. Press briefly the PAPER FEED button to verify if the paper has been hooked (the handle on the box must turn automatically).

If the paper doesn't seem to be hooked, advance it a bit by rotating the handle manually, then test again by pressing briefly the PAPER FEED button.

11) Move the lever (fig. 52 nr.**9**) in work position, and close the door of the transport section. Select

> **Laser printer** > **Load paper**

from ImageLab main menu: at the confirmation request, select **Yes**. If the paper has been hooked correctly, the loading procedure is run by eliminating the part of paper that got exposed during the insertion.

7.4.2 LaserLab 30 (12")

Attention: the loading of the paper roll inside the box must be performed in the darkroom.

The box components are described above (see fig. 53 on page 57):

1.   Paper height adjustable flanges.

2.   Index point for adjusting paper guides.

3.   Adjustable paper guides.

4.   Manual paper advancement-rewinding knob.

5.   Deblocking lever, for manual rewinding.

6.   Paper roll dispenser with index point for adjusting flanges.

7.   Paper transport roller and counterroller.

To load the paper proceed as follows:

1) Adjust the guides for the selected paper width in daylight (fig. 53 nr. **3**).

2) Position a flange on the selected paper width (fig. 53 nr. **1**).

3) Take off the hub (fig. 53 nr. **6**) and insert the paper roll in the darkroom. Position the second flange till beating.

4) Insert paper in the box in order to have the emulsion side towards the bottom when it is inserted between roller and counterroller (fig. 53 nr. **7**).

5) Trim the paper border in order to have no creasing or tears. Insert the paper between the guide combs and push it lightly between the rollers till reach the light tight door of the pas-

sage slot.
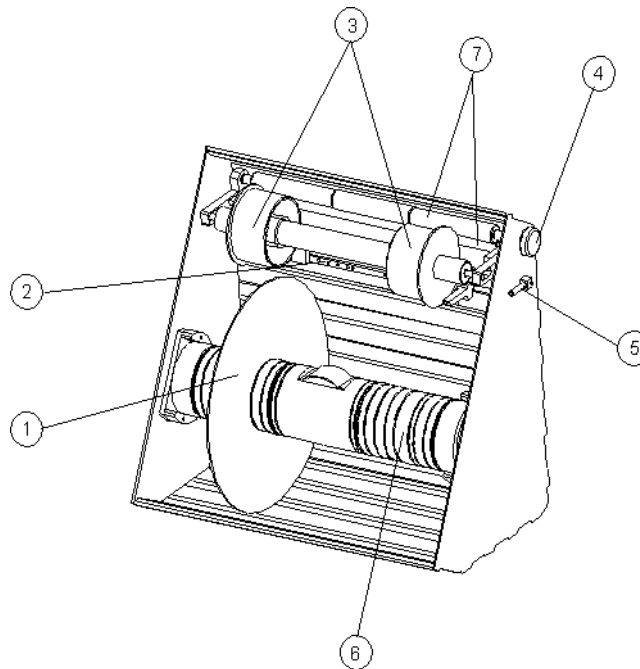
Fig.53 - Paper box for LaserLab 30 (12")

6) To release the pressure between roller and counterroller just push up the lever (fig. 53 nr. **5**) near to the paper manual transport knob (can be turned only counterclockwise to push the paper out of the box).

7) Turn counterclockwise the knob that turns the hub (fig. 53 nr. **4**) of the paper to put it in light traction.

8) Close the cover verifying by touch that it is well inside the grooves and the latches are blocked.

9) Once the paper has been loaded, insert the paper cassette inside the guides. Push it till the clamp blocks it. Close the stop knob.

10) Turn the knob placed on the top of the paper box (fig. 53 nr. **4**) till advancing the paper beyond the cutter rollers. Through a little pressure on the PAPER FEED push-button the paper has to go out for a little in the left of the suction plate. Verify the knob to turn by itself.

If the paper does not seem yet locked, turn a little the knob and push again the PAPER FEED button.

11) Close the doors. Select

Laser printer > **Load paper**

from the main menu. Confirm with the **Yes** command. If the paper is correctly locked, the first fogged piece of paper will be loaded and eliminated.

8 Package and School printing

8.1 How to start

The first important thing is to have a sketch or a drawing with the exact size of the whole package and the size of the single formats that compose it.

On fig. 54 is shown a sample of a theoretic package, start now by setting the single formats (see
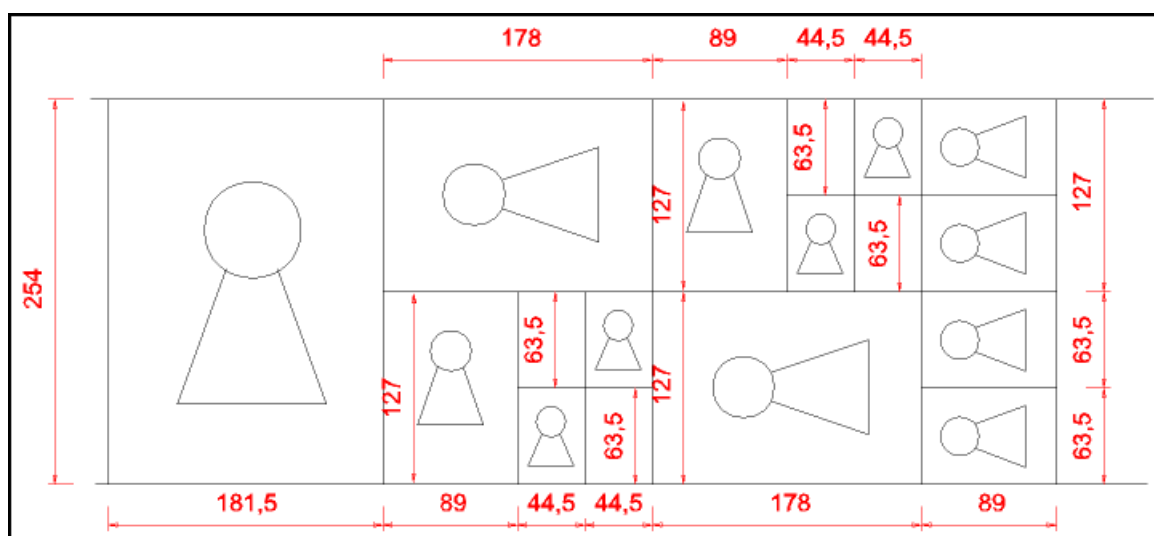
Fig.54 - Example of a package

9.6 "Modifying and creating formats" on page 82).

It is suggested to set up the needed formats by giving them mnemonic names that make their identification easy; for example **Pkg_89x127_Vert.** or **Pkg_89x127_Hor.** Both the names shown on first characters that the format is set to be used in a package, the numbers identify the size and the last characters indicates the orientation of the format.

To work easily we suggest to use the capability to assign mnemonic names to the format.

8.2 Package set up

The examples that follows are installed together with **ImageLab** software, the operator can follow these instructions step by step.

Select the menu item

File > **Image processor** > **Package...**.

The package configuration dialog window (**Packaging setup**) will be shown (see fig. 55)

The item **Package name:** indicates the reference name of the composition we are setting, to cre-
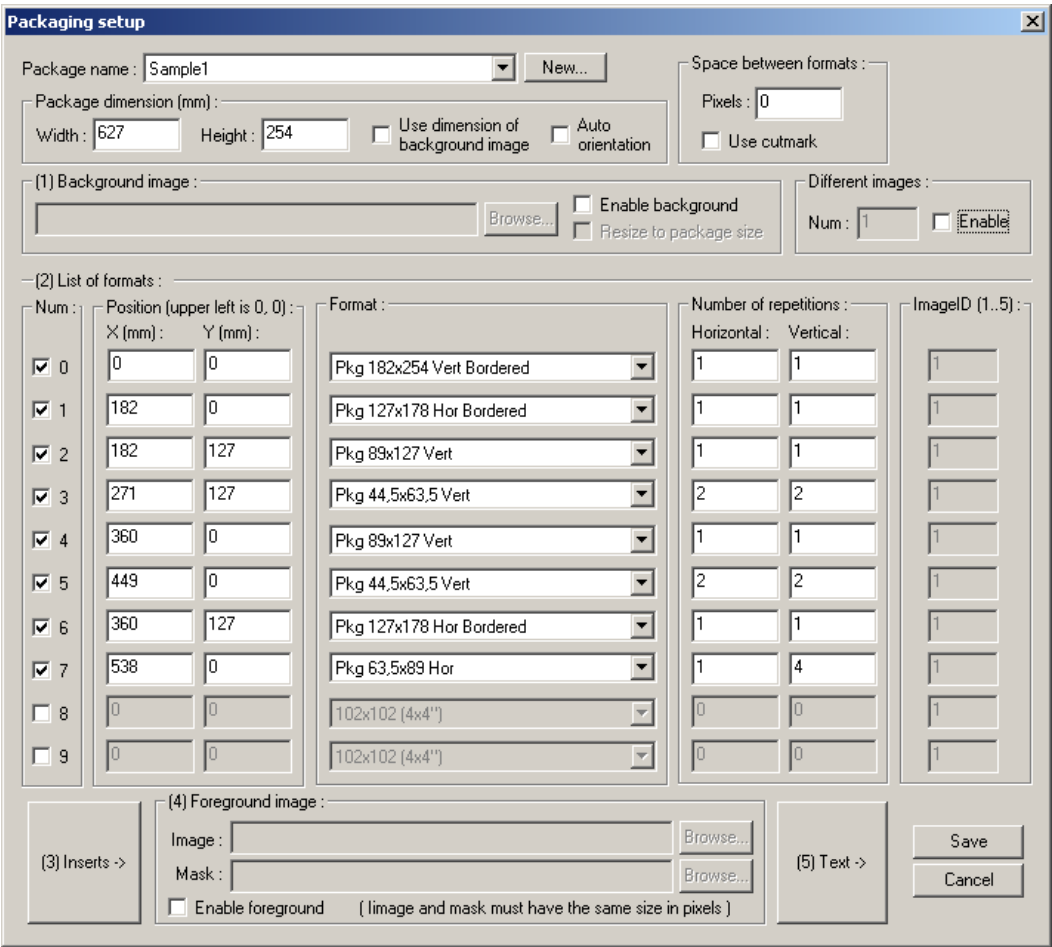
Fig.55 - Packaging setup dialog

ate a new package select **New** and then type the name. The values **Package dimension (mm)** indicate the whole package.

Put the attention now at the real generation of the package. The reference is the drawing on fig. 54 on page 59, select the first programming row (identified with 0) the columns **X(mm)** and **Y(mm)** indicate the coordinates where the format has to be placed, the values will be 0 and 0 because the top left corner of the package is the start point.

The column **Format:** allows to select the format to associate at the row, it is a curtain menu, by clicking on the down arrow the list of the formats available will be shown, select the **Pkg_182x254_Vert.**

The columns **Number of repetitions:, Horizontal:** and **Vertical:**, allow to set automatically the repetition, if needed, of the same format, if only 1 image is needed set Horizontal and Vertical to 1.

Check now the second row, identified with 1, the source point for the second image will be **X=182** and **Y=0**.

The **X** value is **182** because the first format has used 182mm of paper from the left edge of the

print. **Y** is 0 because the vertical source is the top edge of the print.

The format to select is the **Pkg_127x178_Hor** as shown on the drawing, the repetition is vertical 1 and horizontal 1 because only 1 image is required.

Have a step now to the fourth row (identified with 3). The source point, to place the four images 44.5x63.5, will be **X=182 (first image 182x254) + 89 (third image 89x127))=271mm**. While **Y=127** because the source point is 127 mm lower then the top edge of the paper.

The repetition for row number 3 has to be set horizontal 2 and vertical 2, as you can see on the drawing (see fig. 54 on page 59).

To continue this operation or modify the existing package, it is enough to remember that the source point is the left top corner of the print.

In a similar way to photo indexes (see 6.5 "Creating a photo index (index print)" on page 35), it's possible to set a separation thickness (in pixels) between two images using the **Space between formats** field. Cutmark setting is also available (**Use cutmarks**). For more informations see 9.8 "Programming cutmarks" on page 90.

Don't forget to calculate the total length of the package and put it in the **Package dimension(mm):**. Be careful in exactly matching the most external images with the package size, otherwise they'll be lost.

The package can be built starting from a background image (by **Use background** command). Its path is selected by **Browse** command. If **Resize to package size** option is enabled, the background will be automatically resized to the selected package size. On the other side, one can enable the option called **Use dimension of background image** to resize the package to the background.

The **Auto orientation** option, if selected, allows the package automatic orientation during the print in order to minimize the waste of paper. See also 9.6 "Modifying and creating formats" on page 82.

> *Attention!* *always select* **Save** *before exiting, otherwise the new setting will be lost.*

8.3 Manual and automatic printing of a package

The **manual printing** allows to verify the result, on the monitor, of the package being generated on previous paragraph.

Load an image, it will be used to generate the package. Select the menu item

Image > Generate package....

The **Process package** dialog window for package generation will appear (see fig. 56).

Select the down arrow on the dialog window to show the list of the available packages. In the example the package **Sample1** has been selected.

Select **Ok** to generate the package, few second will pass before the generated package will appear on the monitor.
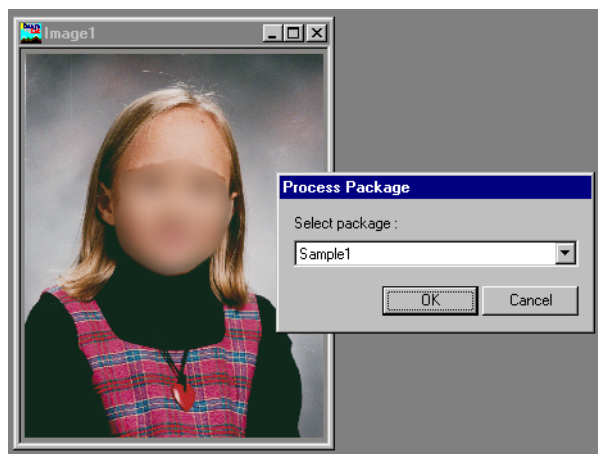
Fig.56 - Package generation

If it is not completely shown (usually the zoom factor exceed) select the **zoom to fit** icon shown on side (zoom fit).

The result should be the one you can see on fig. 57. To have a better view and make the sample understandable, each single size has been generated with 1mm of white border, in this way is possible to appreciate the separation between the images.

Fig.57 - Finished package

It is suggested to continue by making some tests, modifying the package **Sample1** and generating new formats.

The **automatic print** can be set as described on chapter 9 "Auto Print and formats" on page 69.

The difference, between standard format auto print and package auto print, is the selection of

the column **Package** in the **AutoPrint folder list** window. On this column is possible to select which package will be associate to the automatic print folder, it is important select **none** as format in the **Format** column (see fig. 66 on page 72).

8.4 Package inserts, photocards, calendars

While setting up the package, one or more images can be added as inserts. Select

File > **Image processor** > **Package**

menu. The **Packaging setup** window (see fig. 55 on page 60) will appear.

Select **Inserts**: as in fig. 58, the **Inserts** window will be shown. Up to five inserts can be added (by selecting **Enable** box for each one). Every insert is to be specified in position **X(mm)** e **Y(mm)** with respect to package origin point, as described in 8.2 "Package set up" on page 59. Select image format by **Format** pull-down menu, and the related path, by **Browse** command, showed in the **Image** field. Select **OK** back to **Packaging setup** window and complete the package. Be careful that the formats to be added don't cover the previously placed inserts. For example, if package size is as in fig. 54 on page 59, and its only insert is 182x254, the origin for the first format should be **X=182**, **Y=0**.
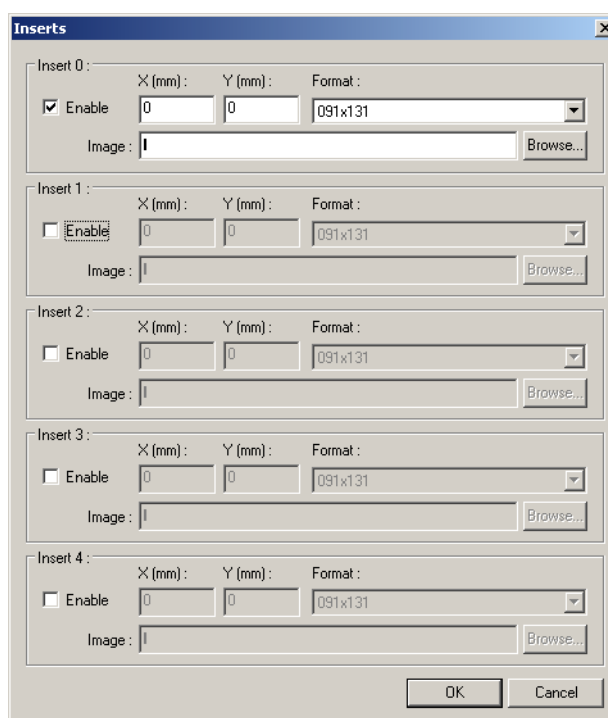
Fig.58 - Inserts dialog

Manually or auto print of a package with inserts is accomplished as described in the previous paragraph. In the following (fig. 59 and fig. 60 on page 64) are shown two packages with one insert (the image on the left).

Fig.59 - Package with an insert

Fig.60 - Another package with an insert

Photocards and calendars are made in this way, simply using a proper text as an insert. The fig. 61 shows an example of a photocards.

Fig.61 - Photocard

Attention: *Polielettronica S.p.a. does not supply any tool for making photocards or calendars.*

It is possible to insert an image with a shading border. For example, open the **Calendar200x.jpg** image, found in the **F:\Greetings**. Then select

Image > Generate Package from the main menu. In the Process package dialog select **Calendar**&**Mask** from the pulldown menu. Confirm with **OK**. After some seconds the subject will appear under the shading frame, as shown in fig. 62.

In the same folder the **Calendar200xMask.jpg** is found. This image is grayscale frame with a shaded border where the subject is to be placed. This mask will not be printed as it is only used to define the frame. In the darkest zones the foreground is visible, but not the subject. In the middle zone both images are visible, while in the clearer one is visible the subject but not the foreground.

Fig.62 - Calendar

The **Calendar&Mask** packaging setup is shown in fig. 63.

Fig.63 - Packaging setup for a calendar

This option is enabled by selecting the **Enable foreground image** box in **(4)Foreground image** frame of that window. In this frame it is possible to select both the foreground (**Image)** and the border (**Mask**), by using the **Browse** command.

Attention: the subject and the frame must have the same format and the same dimensions (rounded to 1mm, i.e. 10 pixels). If it not so, an error message will appear.

8.4.1 Different images in the same package

The example above discussed is related to a package featuring only one image repeated several times. It is possible to create packages including up to five images. Refer to the **Packaging Set-up** window of fig. 55 on page 60. Enable the **Different images** frame through the **Enable** box. The column **ImageID(1÷5)** will be highlighted. Insert in this column the number of the desired image.

The image number gives the arriving order of the images in the LaserLab *print spooler.*

8.4.2 Printing text insertion in the packages

In the **Packaging Setup** window (see fig. 55 on page 60), selecting the **(5)Text** command allows to include in the prints the two text lines coming from the file name:

T1_text1_T2_text2_cpy0000

Attention: it is not possible to insert text in the images through the ImageLab *software. The above described command only shows on prints a text already present. See* Digital Imager *instructions for more details.*

When the **Text** command is selected the dialog window shown in fig. 64 appears. The dialog is divided in two sections, each one is related to one row of text. It is possible to set:

The position (**X** and **Y**).

The dimensions (**Width** and **Height**).

The **Color** of the frame including the text line.

The angle of rotation of the frame including the text (only multiples of 90°).

The **font** of the characters.

Select the **EXT** box to keep the text from the original file name (**T1** and **T2**, if present).
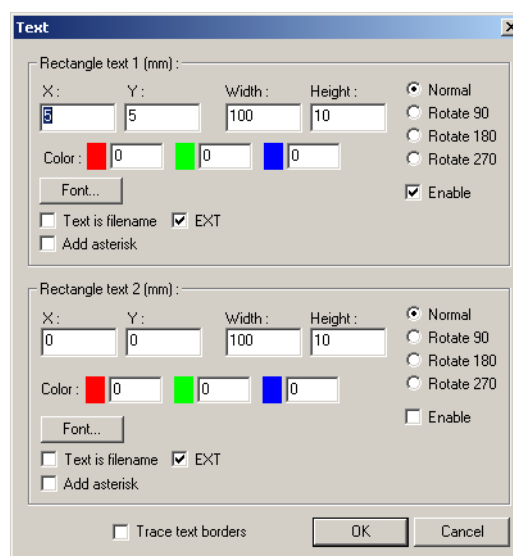
Fig.64 - Text dialog

The only text option accessible through **Imagelab** *is to write the file name.*

In this case deselect the **EXT** box and check the **Text is filename** one.

9 Auto Print and formats

9.1 Introduction

In section 6.4 "Image printing" on page 32, is explained how to print single images, in one or more copies.

To manage a typical work flow, requiring to print a large amount of images all in the same format, the **Autoprint** function is available. In this mode of operation, an ImageLab internal program called **Print Spooler** scans continuously a set of folders, called **Autoprint folders**, takes the images from each folder, and print them according to the format and the other options stored in the folder itself.

In ImageLab *are already set many Autoprint folders, responding to the most common printing requirements.*

To create or modify Autoprint folders see section 9.3 on page 71.

To print images in **Autoprint** mode just copy them in the folders of the desired format. Use the Copy and Paste Windows® functions or drag and drop the images from a window to the Image-Lab one.

It is possible to copy in the Autoprint folders not only single files, but whole image folders.

Attention: If the LaserLab *is connected to the Polielettronica* Digital Imager, *many functions described in this chapter are fully automatized. Please refer to the* Digital Imager *instructions manual.*

9.2 Starting, Completion, Stopping

Auto

Selecting the icon shown on the left (**Main Bar**) the **Image processor** dialog window is shown (fig. 65).
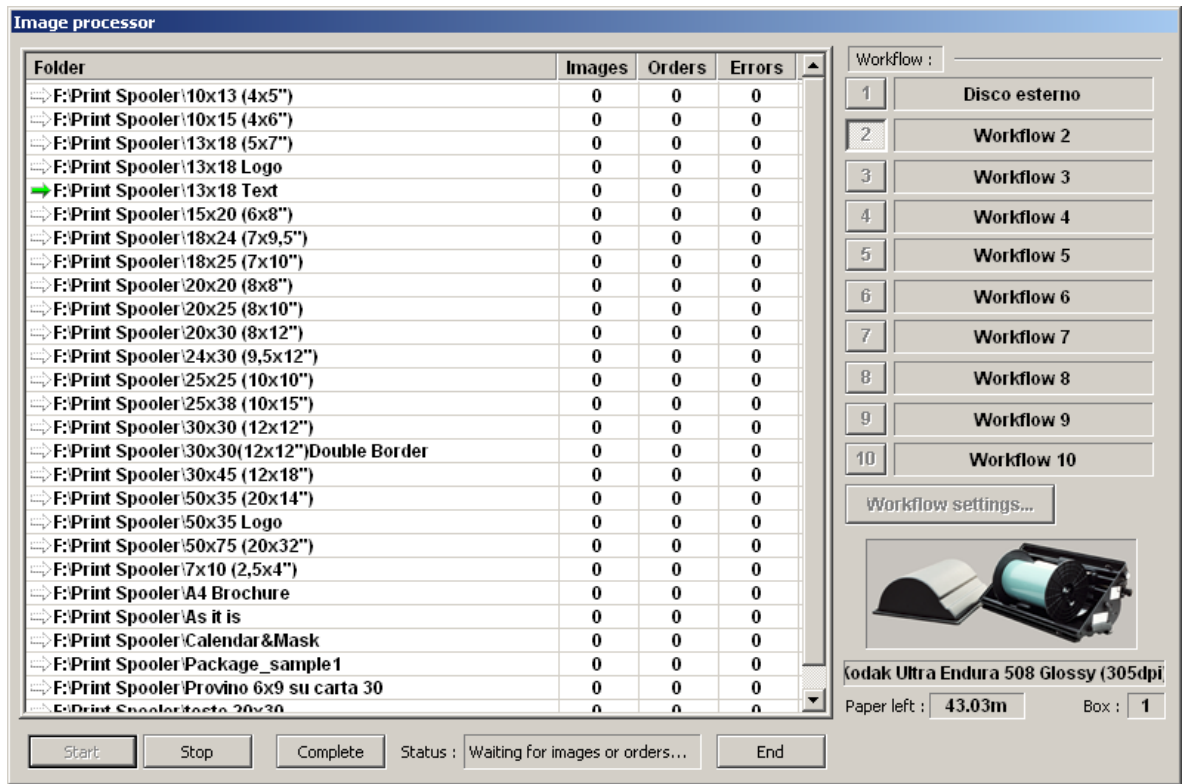
Fig.65 - Image processor window

This window allows to start/stop the automatic printing process. Plus, it indicates the state of printing in each autoprint folder. In the upper part are shown the box and the media (paper type) currently in use, plus the paper left to be printed.

Each row in the table is related to a different folder. For each folder are indicated the number of images present, the orders related to that folder and eventually the printing errors occurred.

Attention: *the network connection must be available when the* Autoprint *starts.*

Select **Start** to begin the automatic printing process. The Print Spooler begins to scan the folders. The green arrow indicates the current folder. The system actually prints the images in the folder when one of the two conditions is true:

　　1)　In the folder there are enough images to fill a sheet.

2) In a folder a file called **EndOfOrder** is found. This forces to print all the images in the folder **before** the EndOfOrder.

See sections 9.3.10 "End of Order management" on page 78 and 9.5 "Autoprint orders separation" on page 81 for further details. It is always possible to force the print of the images in **all the folders** simply selecting the **Complete** button**.** All the images found in the folders by the Print Spooler will be immediately printed**.**

To stop the automatic printing, first select the **Stop** command, then wait for the **End** command to be available. The arrow stops near to the last scanned folder and becomes red. This will be the starting position when the Autoprint cycle will be started again.

The **Status** box shows the current status of the automatic print, which can be one of the following:

1) **Waiting for Images or orders...:** there are no images to print or there are not enough to fill a sheet (see next paragraph). Use the **Complete** command to force the printing of the images left.

2) **Processing:** the images are being processed for the print (see 9.6 "Modifying and creating formats" on page 82)

3) **Printing:** the images after being charged and processed is on print.

When it is necessary to repeat the print of the same image (**quantity**), the name of the image has to be modified: add to the name the following characters: **cpy000** where 000 is the amount of needed prints. The quantity must be required by using always 3digits, if five copy are needed the correct message is **cpy005**, if the system finds **cpy5** the command is ignored and only one copy will be printed. The maximum value allowed is **999**. Example of correct name: the original file name is **PIPPO1**, to get 35 copy the modified name could be **cpy035PIPPO1** or **PIPPO1cpy035,** also **cpy035** is a valid name to get the correct amount of prints.

> *Attention! By default, the printing operation deletes the printed files from the folder.*

It is possible modify this setting, forcing the already printed files to be moved to a subfolder of the printing folder. See the **Move** item described at section 9.3.11 on page 78.

> *Tip. It is possible to customize the automatic print. Depending on the different jobs or different operators, it is possible to group one or more folder, and activate them all together by pressing one of the numbered buttons in the **Automatic print** window.*
>
> See 9.3.12 "Workflow management with Autoprint" on page 78.

9.3 Automatic printing folders options

Press the button shown on the left (**Main Bar**), or select the

File > **Image processor** > **Autoprint folders**

menu. The **Autoprint Folders list** dialog of will appear. From here, it is possible to create, de-

fine and enable the automatic print folder. The window consist basically of a table. Each row of the table is related to an autoprint folder. Each cell of a table can be double-clicked to access several features explained in the following.

*Attention: all the modifications made in the **Autoprint folder list** window must be confirmed with the **OK** command. If the window is simply closed, the modifications will be discarded.*

..

Fig.66 - Autoprint folder list window

9.3.1 Folders enable/disable

Double-clicking on the first column (**Status**), one can enable or disable the folders. The cell features a green square (**On**) if the folder is enabled, or a red square (**Off**) when disabled. If a folder is disabled, the print spooler will simply ignore the files stored into it.

9.3.2 Folders path

Double-click on the **Folder** name (sec-
ond column). The **Select directory**
window of fig. 67 appears.

In this way it is possible to assign the
desired path to a certain folder.

A path is valid if it is logically con-
nected to the system (local or network
connected).
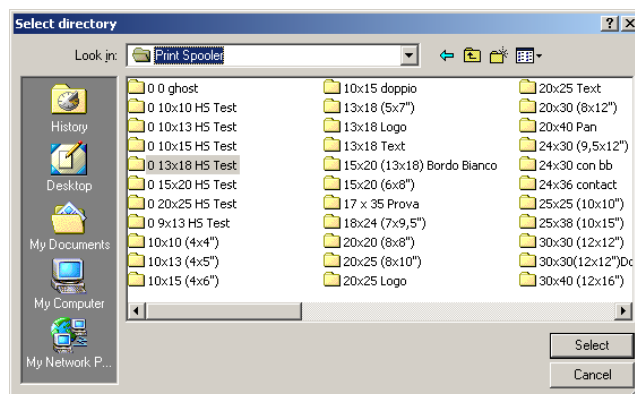
Fig.67 - Select directory dialog

9.3.3 Job type and name

Double-clicking on the **Job type** column allows to define the Job type for a certain folder. The
JobName cell changes together with the **Job type**, as different Job types present different fea-
tures. Three options are available:

Job type	JobName	
Package	**P** **13x18Logo**	The folder is matched to a Package.
Format	**F** **203x254 (8"x10")**	The folder is matched to a Format.
(none)	**(none)**	No Job type matched to the current folder.

If a format is matched to a folder, all the images to be transferred into that folder will be printed
in the format associated to the folder itself. If a package is matched to a package, the print spool-
er will collect the images in the folder to create the defined package. Selecting **(none)** no format
is associated with the folder; each image is then printed in the original format in which it was
saved. See the next section to know how to match packages or formats to the folders.

9.3.4 Matching a format or a package to a folder

As described in 9.3.3, if the **Job type** of a folder is **Format**, the corresponding **JobName** field
features a yellow square with a F inside. Double-click on this field to let the **Format setup** di-

alog appear (fig. 68).
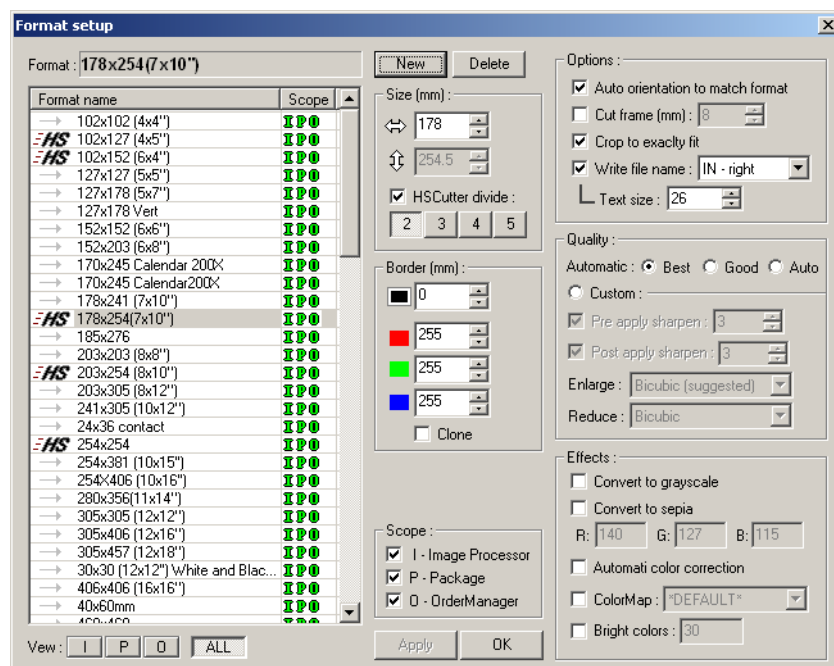
Fig.68 - Format setup window

The desired format can be chosen from the list placed on the left side of the window. Selecting an item of the list, all the related format features will be shown in the window.

*The format name (***Job name***) is only a mnemonic. Please refer to the* **Format setup** *window to know exactly all the format features.*

The right part of the window is about creating a new format and will be explained in detail at section 9.6 on page 82.

If the **Job type** of the folder is **Package**, the corresponding **JobName** field features a green square with a P inside. Double-click on this field to let the **Select package** dialog appear (fig.

69).
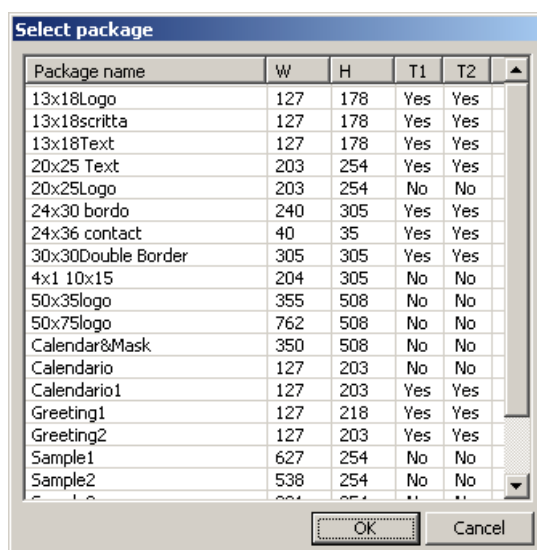
Fig.69 - Select package dialog

Select from the list the package to be matched to the current folder. Press **OK** to confirm or **Cancel** to exit the window without modifications.

See section 8.2 on page 59 to learn how to create packages.

9.3.5 Printing the folders in packs

If the current folder has a format being less then an half of the height of the loaded band, the system can place more than one print on the same sheet to minimize paper waste. Double-click on the cell placed on the **Pack** column to let the Select pack type dialog appear (fig. 70 on page 76).

Four options are available:

1) **None:** each image is printed on a separate sheet, no matter how much paper is wasted.

2) **Vertical:** the images are positioned vertically, until the height of the paper is reached.

3) **Full size:** as many images as possible are placed on the maximum transportable format.

4) **Continuous**: This pack is used to cut prints with cutters different from Polielettronica HSCutter. ***Contact our technical staff for further informations***.

5) **HS cutter**: the resulting layout is fit to be processed by the High Speed Cutter. See section 14.7 "Autoprint and format settings for HS Cutter" on page 127 for further informations.
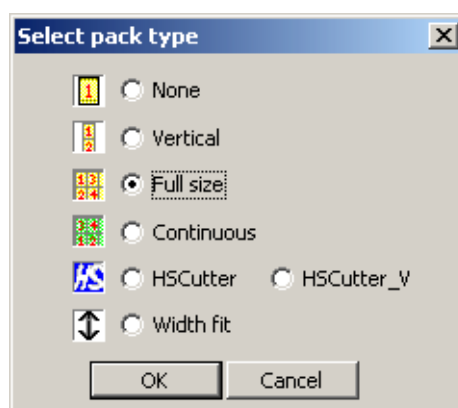
Fig.70 - Select pack type dialog

9.3.6 Shears configuration for HSCutter

Double click on the **Shears** column to match a shears configuration to the current autoprint folder.

This argument is related to the HSCutter *device and it is explained at section 14.8.2 "Shears simulator and Autoprint" on page 132.*

9.3.7 Limiting the maximum transport length

In same cases it could be useful to limit the maximum transport length. This operation is accomplished by limiting the number of columns present on the same sheet (this does not produce waste of paper).

Double-click on the **Col** column to let the Insert number of columns window appear (fig. 71). Type the desired number or select **Automatic** (default) to let the system fill the sheet with the maximum allowed number of columns.

Give **OK** to confirm the modifications, **Cancel** to discard them.
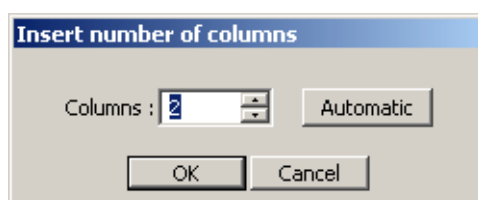
Fig.71 - Insert number of columns dialog

*This command is applicable only if the **Full size** pack is selected on the **Pack** column.*

9.3.8 Spacing the copies and/or adding cutmarks

It is possible to select the type and the size of the separation between the copies when they are placed in a pack: blank space or cutmarks. Double-click the cell on the **Cutmark** column to toggle between the two options **Space** and **Mark**.

The settings for the cutmarks are explained at section 9.8 "Programming cutmarks" on page 90.

If the **Space** option is enabled, type the desired amount of blank space in the box **Space between copies (pixels)**, placed at the window bottom.

Please note that:

1 pixel = 1/10mm *for the printers with **254dpi resolution**. That is, if a blank space of 0,5mm is required, it is necessary to introduce **5** pixels.*

1 pixel = 1/12mm *for the printers with **305dpi resolution**. That is, if a blank space of 0,5mm is required, it is necessary to introduce **6** pixels.*

9.3.9 Choosing the paper box for a folder

Double-click on the **Box** column to let the **Select box** dialog appear (fig. 72).

In this window it is possible to match a box (and a paper type) to a specific folder. If the folder has to be printed regardless from the paper used, select **Any mounted box** (default).

Select box	
Box 1	Kodak Digital III 508 Glossy
Box 2	Fuji Crystal Archive DP 508 glossy
Box 3	Kodak Digital III 508 semi-matt
Box 4	Kodak Supra Endura 152 Glossy
Box 5	Kodak Supra Endura 508 Glossy
Box 6	Kodak Digital III 508 Glossy
Box 7	Kodak Digital III 508 Glossy
Box 8	Kodak Digital III 508 Glossy
Any mounted box	
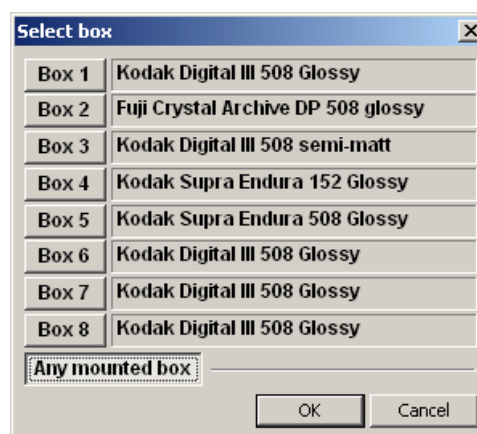
Fig.72 - Select box dialog

9.3.10 End of Order management

To set the separation among orders, double-click on the **EO** column to toggle between the values **Yes** and **No**.

EO = Yes	The print starts as soon as an **EndOf Order** file is encountered.
EO = No	The print starts when the format is completed.

See section 9.5 on page 81 for further informations about order management and separation within the Autoprint *function.*

9.3.11 Destination of printed files

Double-click on the column **Move** to toggle between the **Mov** and the **Del** options.

If the **Mov** option is enabled, the printed files are not deleted but moved to a subfolder of the print spooler format folder called **Moved**.

Attention: The **Moved** *subfolders are* ***not*** *automatically deleted from the La-serLab. If this option is enabled, we suggest to periodically clean up the subfolders, to avoid the risk of filling the hard disk.*

If the **Del** option is enabled (default choice), the printed files are deleted.

9.3.12 Workflow management with Autoprint

It is often requested to launch the print not of all folder, but only a specific group of them, depending on the job or the operator. This is accomplished by the **Workflow** function.

In the **Automatic print** dialog of fig. 65 on page 70, near the **Workflow** item, are placed ten buttons, numbered from 1 to 10. Each button can be bound to a folder, or a group of folder. When the button is pressed, all the folder in the related group are enabled in the automatic print process.
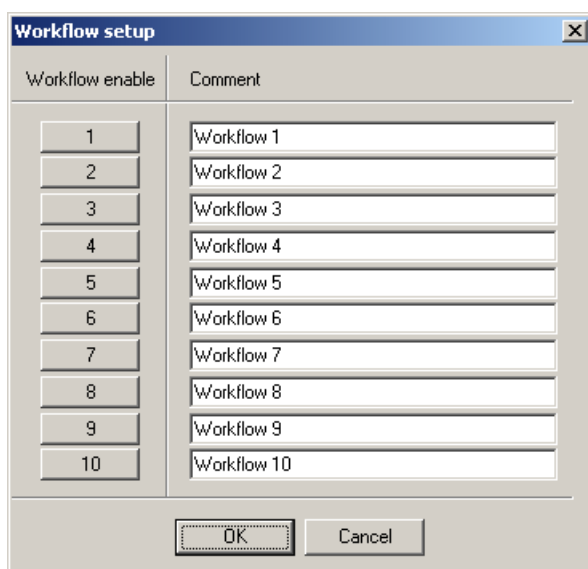
Fig.73 - Workflow setup dialog

Each button (folder group) can be identified by a description. For example: "Lucid 300 paper", or "image correcting operators" or "professional opaque print". Use the **Setup...** command placed on the right of the ten buttons. The **Workflow setup** dialog appears, as shown in fig. 73. Type the comment near the button to be enabled.

The buttons can be enabled both from this dialog and from the **Automatic print** one (fig. 65 on page 70).

Give the **OK** command to confirm the modifications, or the **Cancel** command to discard them.
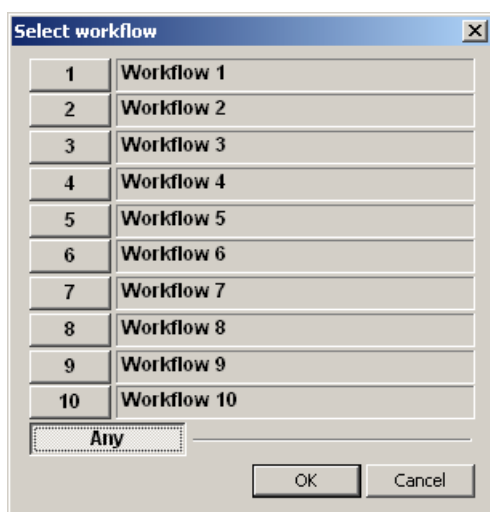
Fig.74 - Select workflow dialog

To bind a folder to a button, double-click on the **WF** column of the **Autoprint folder list** (fig. 66 on page 72). The **Select workflow** window appears, as shown in fig. 74.

The selected workflow will be coupled to the current folder. Selecting **Any** keeps the folder always enabled without reference to any button. The selected value is shown in the **WF** column.

9.3.13 Creating or deleting an AutoPrint folder

To create a new folder, select the **Add** button found on the lower left corner of the **Autoprint folder list** dialog (fig. 66 on page 72). A new row will be added at the bottom of the list.

First select the new row. The new folder is not enabled by default (**Off** on the Status column) and the **Folder** field displays (**Empty**).
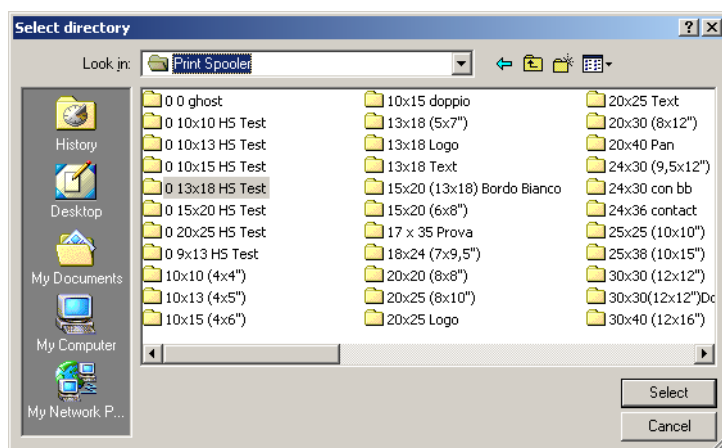
Fig.75 - Select directory dialog

Double-click on the **Folder** column. The **Select directory** dialog appears, as shown in fig. 75. Reach the desired folder and then click select to add it the list of the available ones. If the folder does not yet exist, it can be created on the fly by selecting the **Create New Folder** icon, then typing the format to bind to it as its name.

Warning: The name is not the actual format, but simply a reminder to the operator about which format is bound to the folder.

In the row related to the new folder, now the new path and name is shown (**Folder** column). From now on it is possible to give to the folder all the desired features, as described in the previous sections (9.3.1 - 9.3.12).

1) The new folder is disabled by default. Enable it by double-clicking on the **Status** column (section 9.3.1 on page 72).

2) Decide if matching the new folder to a format or a package by double-clicking on the **Job Type** column (9.3.3 on page 73).

3) Assign the specific package/folder by double-clicking on the **JobName** field. See par.9.3.4 on page 73.

4) Set the pack printing, if desired, by double-clicking on the **Pack** column (**None** is the default option). See 9.3.5 on page 75.

5) Set the other folder properties by double.clicking on the proper columns. Properties include: cutmarks, paper box, printed files destination, workflow management and others. Refer to the proper sections.

To delete a folder, select the corresponding row and press the **Delete** button. Give **OK** to the confirmation request.

9.4 Unprintable files management

Autoprint folders can include files that are not printable for several reasons: for example, files that are not images or images in not a supported format.

View these files management op-
tions through selecting the item:

**File > Image processor > Unprint-
able files options**...

The **Unprintable files options** win-
dow is shown in fig. 76.
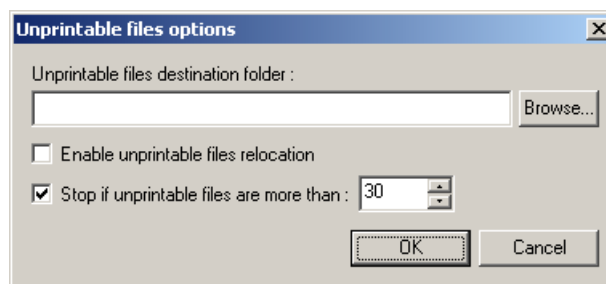
Fig.76 - Unprintable files options dialog

Unprintable files destination folder: select the destination folder for the unprintable files act-
ing on the pull-down menu.

Enable unprintable files relocation: if this box is selected, the unprintable files will be relo-
cated in the destination folder. If the box is not selected, the unprintable files will be left in the
original autoprint folders (default option).

Stop if unprintable files are more than: if this option is enabled, the printing process will stop
and produce an error message as soon as the number of unprintable files found will exceed the
number introduced in the box.

9.5 Autoprint orders separation

By default, autoprint system tries always to print first the first arrived files in a folder, when their
number can fill a whole sheet. When two orders come to LaserLab from two different operators
(working on two different folders), this could generate confusion.

To solve this problem, set to **Yes** the **EO** column in the **Autoprint folder list** window (see.fig.
66 on page 72).

From now on, the system doesn't print any **EO** enabled folder file until the reception of an **End-
ofOrder** called file. This file is present for example in **Print Spooler** folder, just copy it in your
folder. When **EndofOrder** file is received, the system begins to print all the files in that folder.

When more than one order is to be placed in the same folder, separate them by using the **End-
ofOrder***** called file. The asterisk represents a progressive number, or order reference number.
We suggest again to refer to **EndofOrder** files present in the **Print Spooler** folder.

The **EndOfOrder** *is a text file readable by a text editor (*Notepad, *for exam-
ple).*

9.5.1 EndOfOrder files and index print

A command line can be typed in a **EndOfOrder** file, in order to generate a photo index (see

also section 6.5 "Creating a photo index (index print)" on page 35). **Attention**: it is necessary to press the **ENTER** key after typing the command. Two options are available. If **Index=1** + **[ENTER]** is typed, ImageLab will generate the index at the end of the order, and will print the index after the images. If **Index=2** + **[ENTER]** is typed, only the index (and not the images) will be printed. This last option could be useful in automatic contact sheet work mode.

Attention*: if the* LaserLab *is connected with the* Digital Imager*, the option* **In-dex=1** *is automatically included in the* **EndOfOrder** *file when sending the folders to the printers.*

9.6 Modifying and creating formats

The formats, that can be associated to the automatic printing or used in the direct resizing (see 6.8 "Resizing and basic manipulation (Resize Bar)" on page 40), must be operator defined.
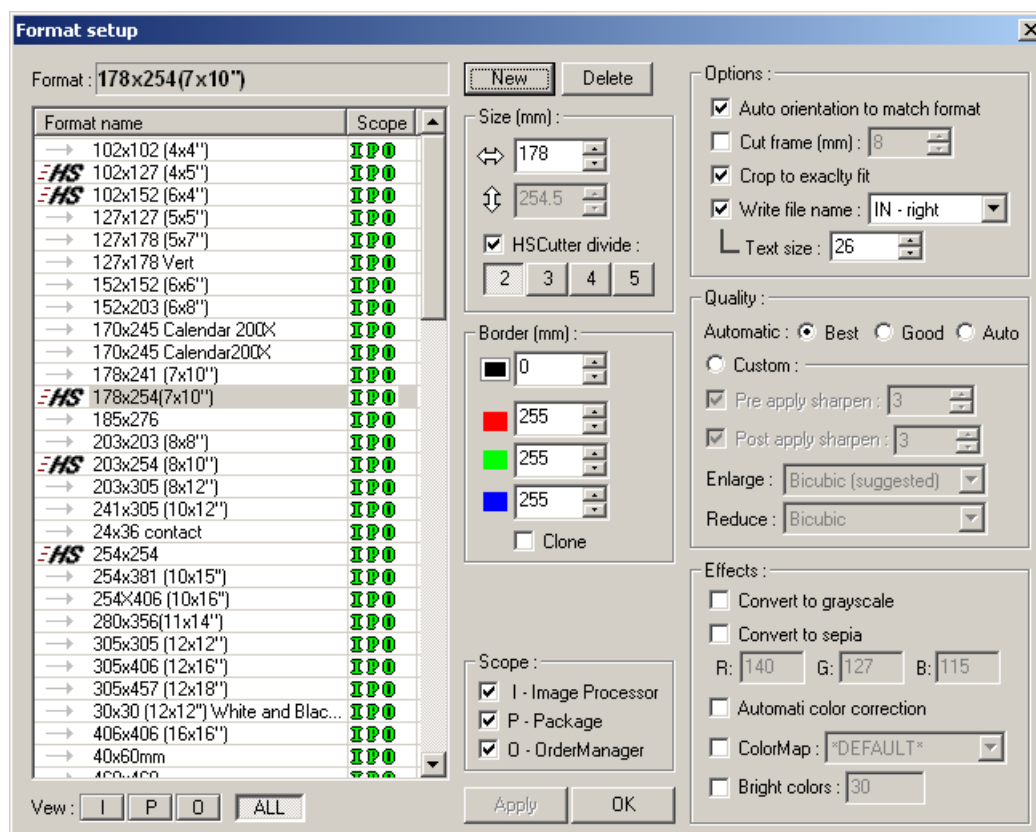
Fig.77 - Format setup dialog

Select the

File > Image processor > Formats

menu item, or select the **Format** button on the **Main Bar** (shown at the left) to let the **Format setup** window (shown in fig. 77 on page 82) appear.

The list on the left is the list of all available format. The current format is indicated in the **Format** field placed at the top left corner of the window. To select an existing format, just click on it in the list. All the fields will show the options related to that format.

9.6.1 Format setting: size and border

The options included in the **Dimensions (mm)** frame of the **Format setup** window allow to set the size of the current format. The width is indicated by the **horizontal arrows** and the height by the **vertical arrows**.

The dimensions are in millimeters.

In the **Border** frame it is possible to add a border to the printed images.
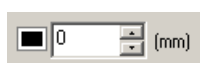
Type a number greater than zero in this box to add a border of the desired size to the image. The zero value means no border. The border color is selectable by the three color boxes below.

Using the **Clone** option it is possible to copy the image colors on the added border. This could be useful when the print has to be processed by an automatic cutter.

9.6.2 Format setting: special attributes

This option is used when the LaserLab is connected to the Polielettronica HS Cutting station. See section 14.7 "Autoprint and format settings for HS Cutter" on page 127, for more details.

9.6.3 Format setting: scope

In progress. This option will be fully working with the next releases of ImageLab.

9.6.4 Format settings: options

In the following is given the explanation of the fields in the **Options** frame of the **Format setup** window (fig. 77 on page 82).

Auto orientation
to match format   Automatically changes the image orientation to make it match the printing format orientation. In the example of fig. 78 on page 84 are shown two examples: the top one shows an horizontal image, a vertical format and the result if the option is left unchecked; in the second example, the situation is the same but the option is

checked: the result is an automatic rotation of the image to match the format. If the image is perfectly square or is already in the correct format, this option will not do anything.
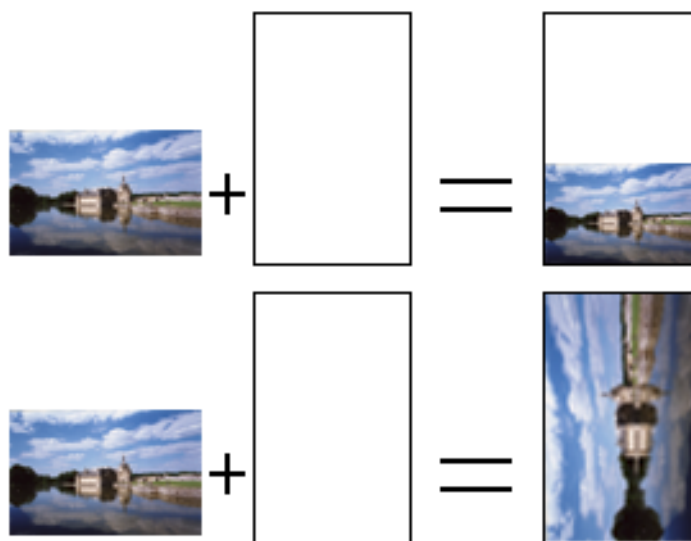
Fig.78 - Auto orientation

Cut frame (mm)	Certain images are built with a frame (e. g. photo CD); select this option to set the width (in millimeters) for frame elimination.
Crop to exacly fit	The image may not be completely in canon with the printing format; for example, the image is in a 1000x1200 pixel format, but the printing format is be a 20x30. Possibilities are two: **The option is unchecked**. This leads, in the example, to a height of 20, but also two white bands on the 30 side, because the original image cannot cover the entire length. **The option is checked**. The result is a full 20x30 format where two bands of the pictures got cut (at the top and at the bottom) to fit inside the printing format.
Write file name	This selection adds file name on the print border. It is possible to select the position of the text. The **size** of the text is selectable too.

9.6.5 Format settings: quality

In the **Quality** frame of the **Format setup** window (fig. 77 on page 82) are found several options allowing to include image enhancement procedures in the format.

Automatic	Leaves fully to the system the image enhancement. The only option is to choose if the enhancement procedure should be as

accurate as possible (**Best** option), being a little slower, or as fast as possible (**Fast** option), losing a little quality. The **Good** option represents a good compromise between the other two.
If a better control on the enhancement is required, select **Custom**.

Pre apply sharpen and
Post apply sharpen   The **Sharpen** or contrast mask can be applied to the image before or after a scaling/resizing operation. The level of sharpening can be selected, from **0** to **9**.

It is hard to foresee when and how much **Sharpen** *is needed; it depends on the source and quality of the original image. Only experience in production can be of help to apply this effect correctly.*

Enlarge and
Reduce   These are two pull-down menus that allow the user to select which interpolation method to use when the image is reduced or enlarged (see 6.8 on page 40).

9.6.6 Format settings: effects

An effect, or a group of effects, can be applied to the current format. These ones are listed in the **Effects** frame of the **Format setup** window (fig. 77 on page 82).

Convert to grayscale   Converts the images in the current format to B&W.

Convert to sepia   Converts the images in the current format to Sepia. The Sepia tone is adjustable through the **R**, **G**, **B** boxes.

Auto density   Enables an automatic density correction procedure for the current format.

Auto colors   Enables an automatic color correction procedure for the current format.

ColorMap   Translates the image using a color management system called ColorMap. See section 11.3 "The ColorMap system" on page 104, for more details.

Bright colors   By introducing a negative (positive) number, the color saturation decreases (increases). The valid range is from **-30** to **100**. Suggested value is **15**.

9.6.7 Modifying an existing format

To modify an existing format proceed as follows:

1) Open the **Format setup** window of fig. 77 on page 82, by selecting:

   File > **Image processor** > **Formats...**

   from the main menu.

2) Select the row corresponding to format to be modified.

3) Modify one or more parameters in the window (refer to the previous sections 9.6.1 - 9.6.6).

4) Select **Apply** to confirm the modifications.

Attention! any modification made on a printing format will be reported on **any auto print folder** *which has that format selected!*

5) Select **OK** to close the window.

9.6.8 Creating a new format

To create a new format proceed as follows:

1) Open the **Format setup** window of fig. 77 on page 82, by selecting:

   File > **Image processor** > **Formats...**

   from the main menu.

2) Select the **New** command. Type the new format name in the **New** window of fig. 79. Give the **OK** command to close the window.
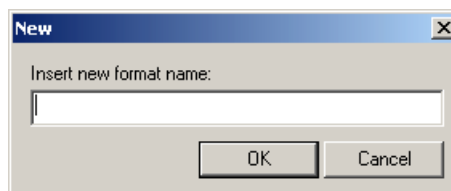
Fig.79 - New window

3) The new format name will appear in the **Format setup** window list.

4) Modify one or more parameters in the window (refer to the previous sections 9.6.1 - 9.6.6).

5) Select **Apply** to confirm the modifications.

6) Select OK to close the **Format setup** window.

7) To bind one or more autoprint folders to the new format, follow the instructions at section 9.3.4 on page 73.

9.6.9 Deleting a format

To delete a format proceed as follows:

1) Open the **Format setup** window of fig. 77 on page 82, by selecting:

   File > Image **processor** > **Formats...**

from the main menu.

2) Select the row corresponding to format to be modified.

3) Select the **Delete** command.

4) Select **Yes** in the confirm request window of fig. 80.
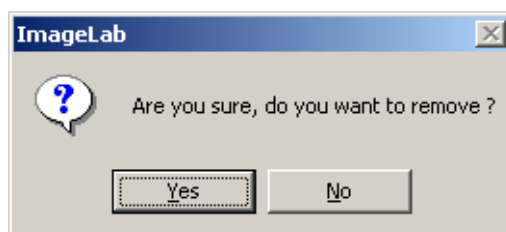
Fig.80 - ImageLab confirm dialog

5) Close the **Format setup** window through the **OK** command.

Attention: If the format has been assigned to an auto print folder it cannot be deleted!

An attempt to remove a format of that kind will produce an error message (fig. 81).
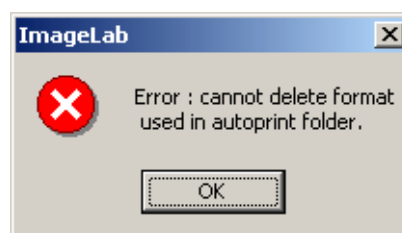
Fig.81 - ImageLab error dialog

9.7 Generating photo indexes in Autoprint mode

It is possible to automatically generate a photo index in autoprint mode (see also section 6.5 "Creating a photo index (index print)" on page 35). The index format will be same of the automatic print folder. For example, if the printing format is 13x18 (5"x7"), the index will be generated in one or more 13x18 pages.

Index print is enabled by the **EndOfOrder** file, if it includes one of the command lines **Index=1** or **Index=2.** See section 9.5 "Autoprint orders separation" on page 81, for more details.

*Attention: if the print folders are sent from a Digital Imager, with a 15.6 or further VAnalyser software release, the **EndOfOrder** file automatically includes the **Index=1** command.*

To generate the Autoprint photo index, select **File > Image processor > Index...** from the main bar menu. The **Index options** window appears, as shown in fig. 82.
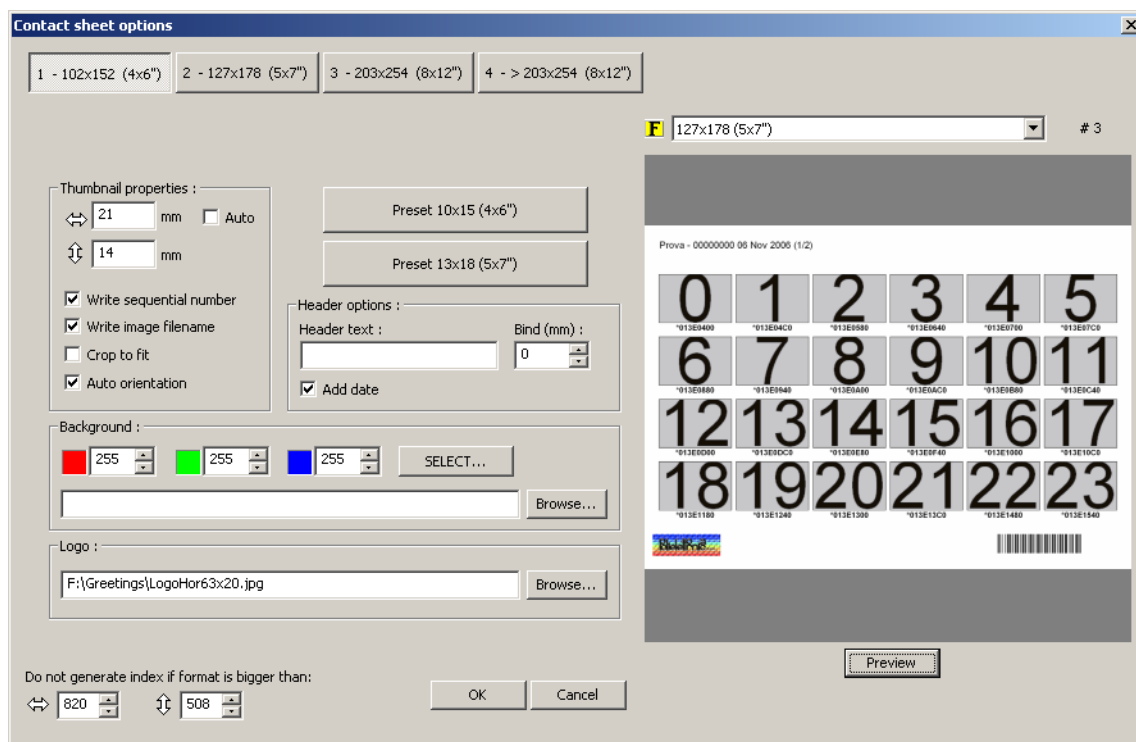
Fig.82 - Contact sheet options dialog

Proceed as follows:

1) Select the desired format in the pull-down menu placed in upper right corner of the window (see fig. 83, nr.**1**).

2) Select the **Preview** button placed in the lower right corner of the **Contact sheet options** window. A preview of the index will be created and shown in the right part of the window.

3) Once generated the preview, at side of the format a number appears. In our example (fig. 83, nr. **2**) it is **#3**.
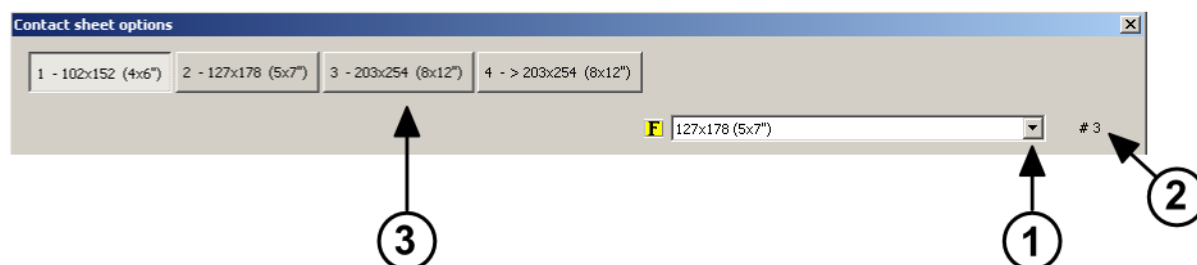
Fig.83 - Matching a format to the index

4) This number indicates which button to select in the upper row (fig. 83, nr. **3**). In our example, the button to select is **3 - 203x254 (8x12")**.

Once matched the desired format to the index, it is possible to tune several parameters, like the position and size of the thumbnails, the background color and so on. These options are explained in the next sections.

There are preset configuration for the formats 10x15 *and* 13x18, *corresponding to the* **Preset 10x15 (4x6")** *and* **Preset 13x18 (5x7")** *buttons respectively. Just press one of the two buttons and give* **OK**.

9.7.1 Thumbnail properties and dimensions

In the Thumbnail properties frame it is possible to set the dimensions of the thumbnails. Use the **horizontal arrows** box to modify the **width** of the thumbnail, and the **vertical arrows** box to modify its **height**.

Auto	Sets automatically the dimensions of the thumbnail in a way that the index print falls in exactly one print format.
Write sequential number	Writes under every thumbnail the sequential number of the image inside the order.
Write image filename	Writes the image name under every thumbnail.
Crop to fit	If necessary, cuts the thumbnail to fit the desired size.
Auto orientation	Chooses the best orientation for the thumbnails to minimize the number of sheets for the index.

9.7.2 Header options

In the **Header options** frame it is possible to set the header properties.

Fill with the desired text the **Header text** box (leave empty = no header).

The **Bind** options gives the size of the space left for eventually binding the index sheets (leave to zero= no bind). It is also possible to add the date to the index (**Add date** checkbox.)

9.7.3 Background and logo options
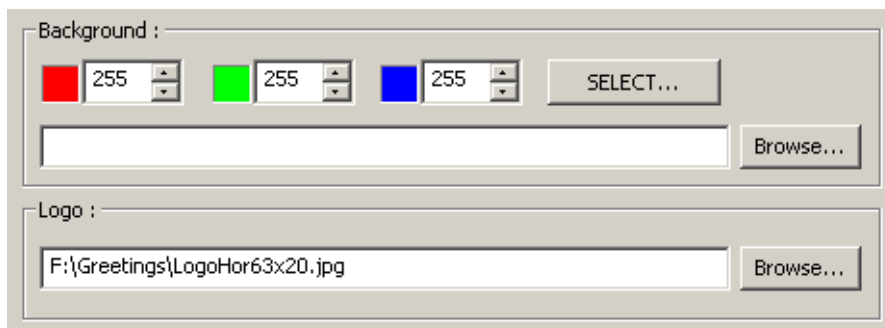
In the **Background** frame one can be choose an image to load as the background for the index. Leaving this box empty means no background image, the color background can be chosen with the color keys or the **SELECT** button (Windows® color chooser). Use the **Browse** key to select the image, the same for the logo to add in the **Logo** frame (leave empty = no logo image).

9.8 Programming cutmarks

Attention: the software package described in this section is optional and has to be purchased separately.

Cutmarks allow certain cutters to recognize the separation point between each copy both horizontally and vertically, and must be setup according to the specifications given by the cutter's manufacturer.

Select the

File > **Image processor** > **Cutmark**

menu. The **Cutmark Setup** window shown in fig. 84 appears.
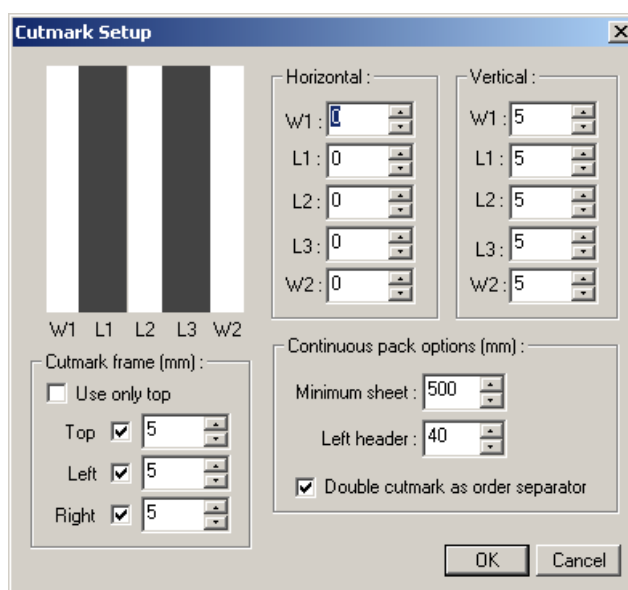
Fig.84 - Cutmark setup window

The values to be set are five:

W1: start space (white) from image to **L1**.

L1: size of the first cutbar (black).

L2: size of the separator space between cutbars (white).

L3: size of the second cutbar (black).

W2: final space (white) from **L3** to next image.

Each value is expressed in pixels.

Please note that:

1 pixel = 1/10mm *for the printers with* **254dpi resolution**. *That is, if a blank space of* 0,5mm *is required, it is necessary to introduce* **5** *pixels.*

1 pixel = 1/12mm *for the printers with* **305dpi resolution**. *That is, if a blank space of* 0,5mm *is required, it is necessary to introduce* **6** *pixels.*

It possible to select different values for horizontal and vertical cutmarks, as two different frames, **Horizontal** and **Vertical**, are present.

The **Cutmark frame** options allow to insert the cutmarks also on the external edges of the sheet that contains the image: this is intended to have a perfect clipping of the image on all its four edges. **Top, Left, Right (mm)** indicate the distance from the edge of the paper to the beginning of the cutmark independently for each one of the edges.

The **Continuous pack** frame is reserved for use of LaserLab with automatic cutters. **Please contact Polielettronica for more informations** about these functions.

10 Paper calibration: daily alignment and creating new profiles

10.1 Introduction

Attention: For a correct and stable printing performance of the equipment, it is necessary to make a daily alignment test, or a test every 8 hours in case of permanent work.

The test compensates every printing drift, included those ones due to the development processing. When it is correctly aligned, the system keeps automatically the color balance with no need of any further correction.

It is necessary to repeat the whole calibration procedure:

- When changing the emulsion/roll

- When a new type of paper is loaded.

10.2 Starting up the calibration sequence

Access the calibration procedure by selecting:

Calibration > Guided paper calibration

from the main menu (fig. 85).
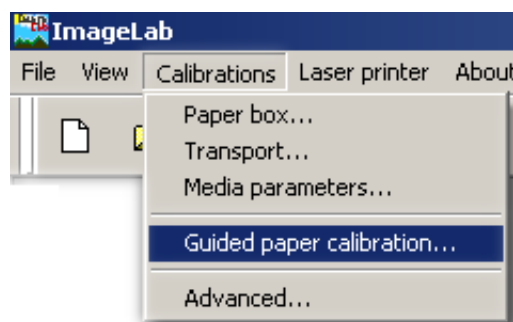
Fig.85 - Calibrations menu

The **Media calibration** window appears, as shown in fig. 86.
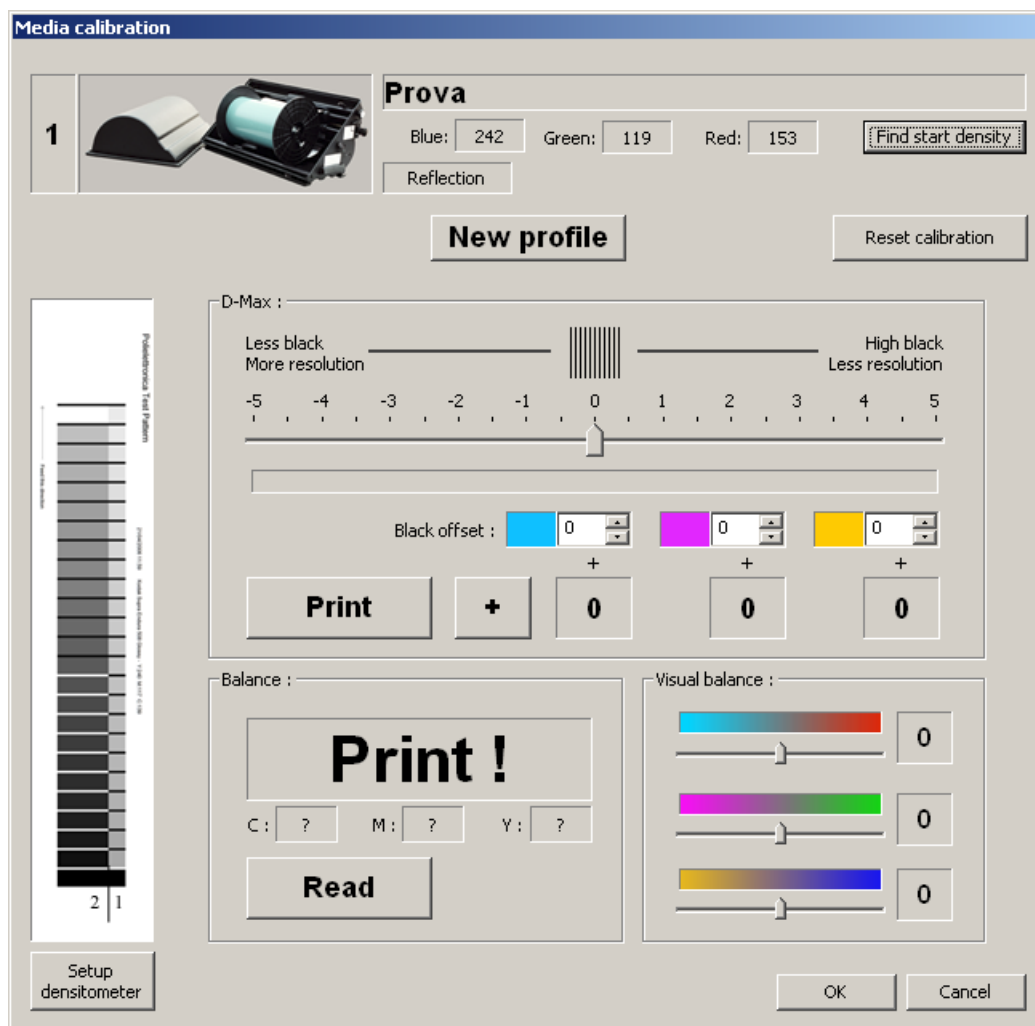
Fig.86 - Media calibration window

10.2.1 Densitometer setup

Attention: if the densitometer is used for the first time, or it has been replaced, it is needed to set it up.

Select the Setup densitometer button placed on the lower left corner. The Setup dialog appears (fig. 87).
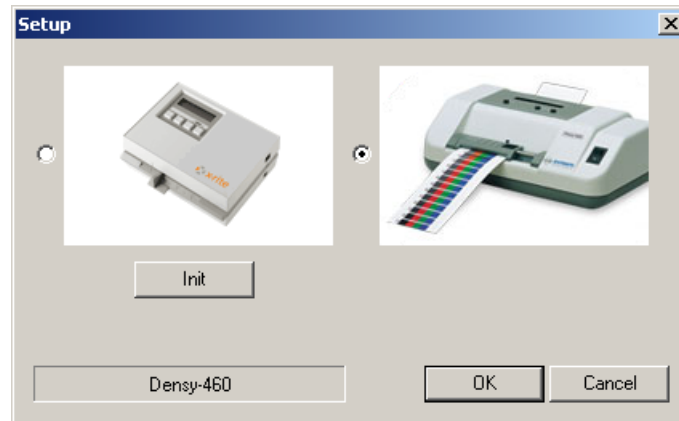
Fig.87 - setup dialog for the densitometer

10.2.2 Printing the target

At the beginning, the writing **Print!** is seen in the canter of the **Media Calibration** window. Select the **Print** button to print target shown in fig. 88.

Inserire in qs. direzione
Feed this direction
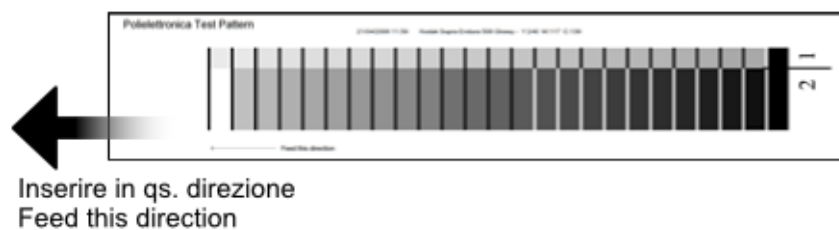
Fig.88 - Strip for the densitometer reading

10.3 Reading the test

Once finished to print, the **Read!** writing appear in the middle of the **Media calibration** window. Select the **Read** button.
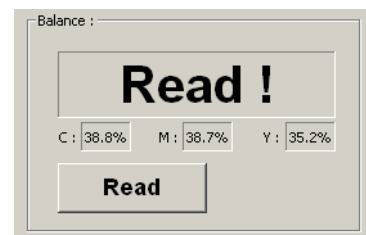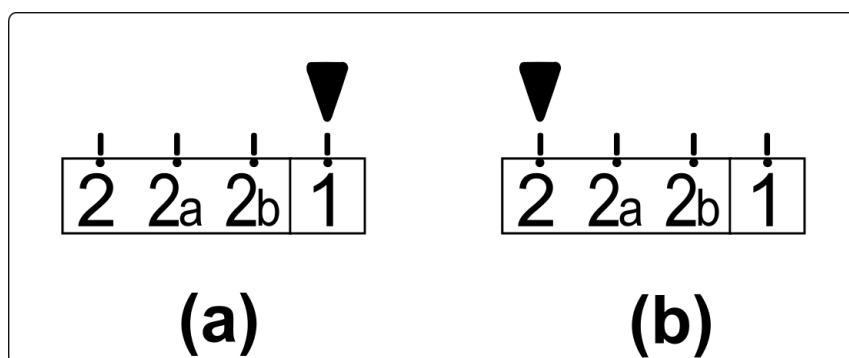
Fig.89 - Reading positions on the densitometer (balanced test)

1) Select on the densitometer the position nr.**1** (fig. 89 - **a**). Insert the target by the **1** side, following the direction shown by the arrow.

2) Select on the densitometer the position nr.**2** (fig. 89 - **b**). Insert the target by the **2**side, following the direction shown by the arrow.

Fig.90 - Reading results

Once the reading has finished, in the upper left corner of the window are shown the densitometer reading for the three layers of the strip

10.3.1 Balanced test

If the test is balanced, the **Done!** writing appears in the middle of the **Media Calibration** window. The calibration is finished. The three values **C**, **M**, **Y** in the **Balance** frame are few percent, this means that the reading is basically balanced.
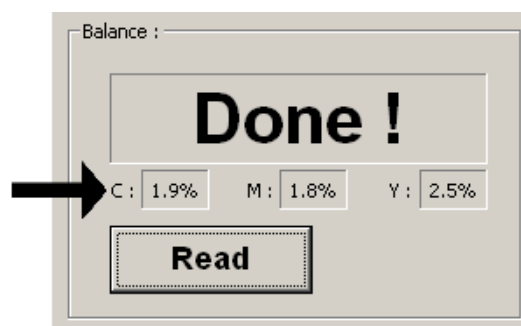
10.3.2 Not balanced test

If the test is far from balance, the reading of the densitometer in position **2** fails. The following message appears on the densitometer display:

INVALID READING

In this case, reset the densitometer through the RESET key and repeat the reading of the strip part 2 in position **2a** (fig. 91 - **c**).

Even the reading fails even in this position, reset again the densitometer through the RESET key and repeat the reading of the strip part 2 in position **2b** (fig. 91 - **d**).
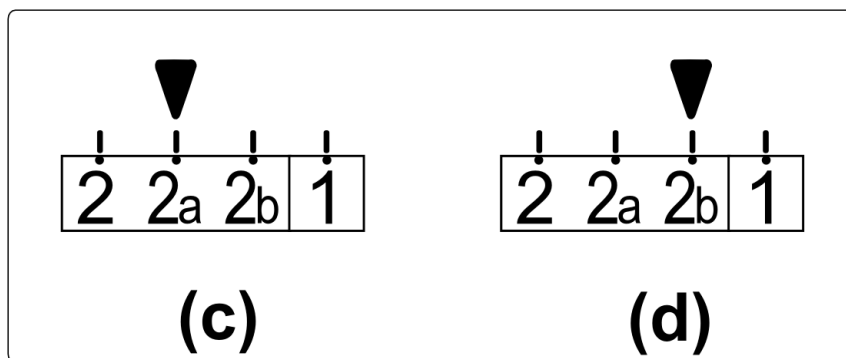
Fig.91 - Reading positions of the densitometer (not balanced test)

If the test is very far from calibration, the system can ask to reset the calibration settings, as shown in fig. 92. At this point, it is possible either to reset or not, keeping in mind that:
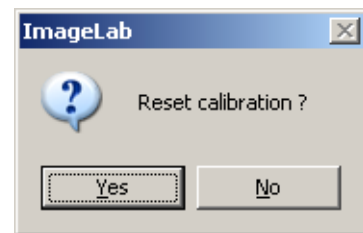
Fig.92 - Calibration reset

- With a calibration reset, the final result is the best possible, but it is needed to start again the procedure from the beginning (**Print** phase).

- Without the calibration reset, the procedure is faster (no need to print the target again) but the result could not be the best possible.

In every case, the procedure finishes when the densitometer reading ends without error and the **Done!** writing appears in the middle of the **Media calibration** window.

10.4 Manual refinement of the calibration

Attention: only experienced users should read this section.

Black offset function. If, after the printing of the target, the black on the test is not satisfactory, it is possible to correct it through the **Black offset** boxes (fig. 93) in the **Media calibration** dialog.

Fig.93 - Black offset

The black correction requires the target to be printed again.

Visual balance function. Once the calibration id finished, if the prints in grayscale are not satisfactory, it is possible to correct manually the black acting on the three sliders in the **Visual balance** frame (fig. 94) of the **Media calibration** window.
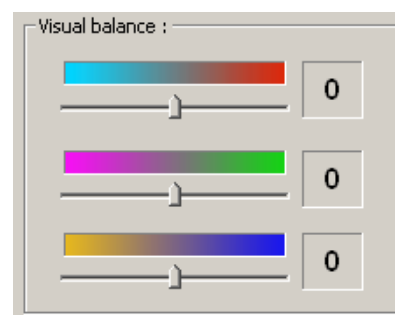
Fig.94 - Visual balance

*Please note that the **Visual balance** acts on all the prints.*

10.5 Back up. How to save the settings

The following procedure will save all the settings available on **ImageLab** software, including paper box mechanical offset, printing formats, packages and so on.

Select **Start** from Windows command bar then select **Run...** The **Run** dialog window shown on

fig. 95 will appear.

Fig.95 - Run window
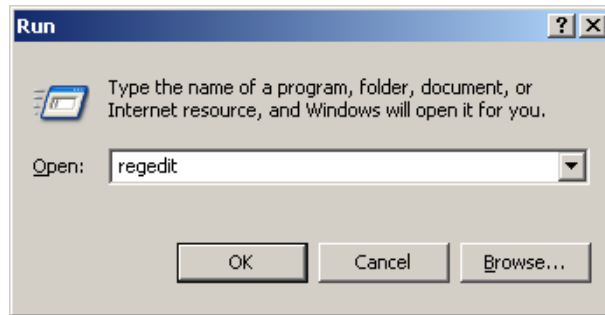
Fig.96 - Registry editor
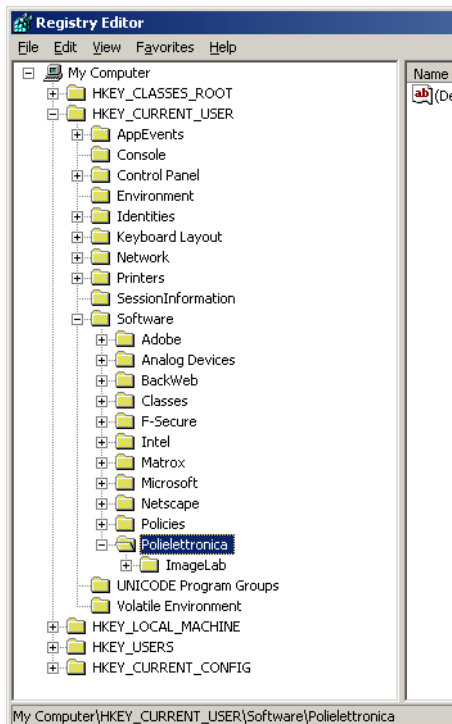
Type in **regedit** then select **OK**, the **Registry Editor** window will appear (see fig. 96).

Select **HKEY_CURRENT_USER** then **Software** and then **Polielettronica** as shown on fig. 96.

We suggest to operate with the maximum attention to avoid to alter the settings of the rest of the system.

Fig.97 - Exporting the registry

Select the menu item **Registry** hen **Export Registry File...** as shown in fig. 97.

From the **Export Registry File** window (shown in fig. 97) is now possible to select on which unit save the backup file.
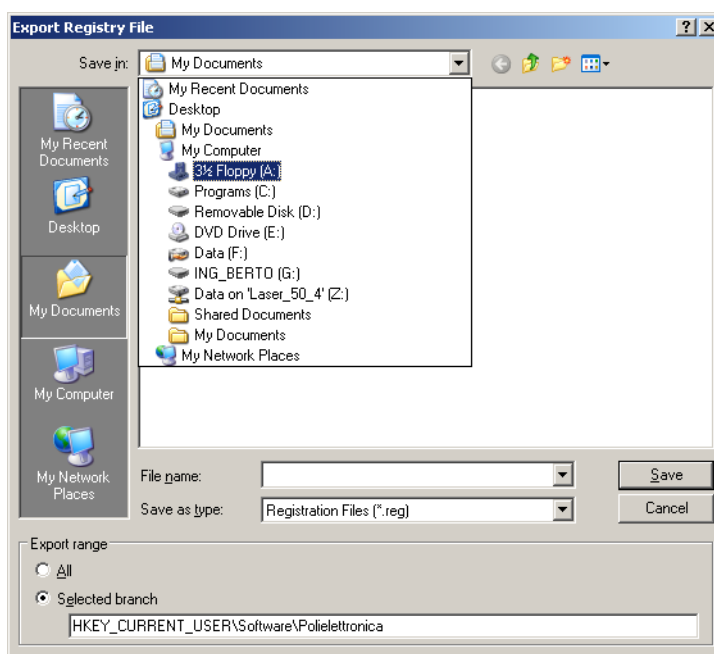
Fig.98 - Export Registry File window

A floppy disk has enough space to contain the back up file, since its size is only some ten kilobytes.

To **restore** the backup it is enough a double click on the file itself, the system will restore the setting automatically.

11 The ColorMap Color Management System

11.1 Quick start

In the following we give a brief and simplified description of a color management system and what is used for.

1) There is a great variety of several image acquisition and printing systems. The main difference is the way of each system to acquire, view and reproduce colors.

2) Example: the color of a real flower is reproduced in one way on the monitor, but in a different way by the printing system. This will happen even if the system are balanced each other. An answer: all the color you see on the monitor are reproduced with the same fidelity on the prints?

3) As different systems work in different 'color spaces', the acquisition system can 'see' some colors the printing system cannot reproduce. The different color spaces will not perfectly overlay, leaving some colors not managed by all systems. This means that, while transferring the images from a system to another, some colors are perfectly reproduced while other ones can never be.

4) Some operation is needed, to understand which colors cannot be reproduced, and replace those ones with other colors managed by the system. The new colors should be as close as possible to the original ones. This operation is accomplished by the Color Management System (CMS).

5) To work, the CMS has to know 'who saw the color' and 'who has to reproduce it'. It works like an interpreter, knowing the language of who is speaking and the language of who is hearing, too. The **input profile** is the language of 'who saw the color': it includes the informations about the device having been generated the image. The **output profile** is the language of 'who has to reproduce the color'.

6) To use a CMS an input profile and an output one are needed.

7) The input profile is usually embedded in a .tiff file.
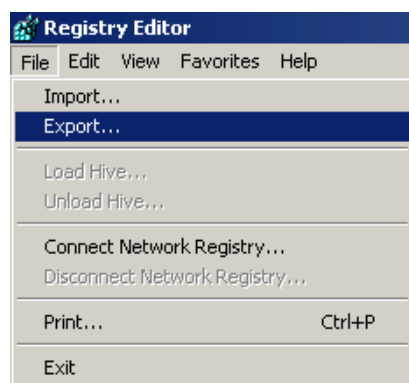
8) The output profile depends on the printing device (LaserLab, in our case) and the used support: different manufacturers, emulsions and surfaces require different profiles.

Attention: *Polielettronica S.p.A. does **not** supply any color profile, neither* CMS *nor* ColorMap.

11.2 The CMS standard system

*We suggest to use this system to the ones who are already experienced with the color profiles (**.icc** and **.icm** file extensions).*

The CMS system works correctly if both the input and output profiles are of a good quality. If

the profiles are accurate, the result will be accurate as well.

The profile generation must be performed on site, where the equipment is working, through proper hardware and software instrumentation. The profiles supplied by Polielettronica are for demonstration and making examples only.

Select

File > **Preferences** > **CMS settings**...

From the main menu bar, to let the **Color Management System settings** window appear (fig. 99).
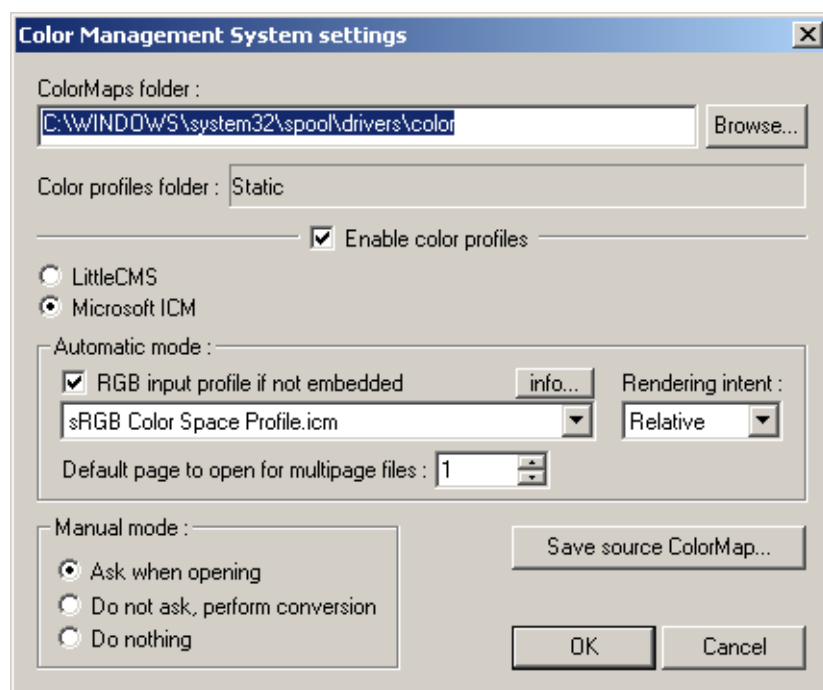
Fig.99 - Color Management System settings dialog

*Make sure that the **Enable color profile** box is enabled (with the check mark inside it).*

*We suggest to let the default option **Microsoft ICM** enabled.*

The CMS system requires the image files to be coupled to an input profile. If the device generating the image does not include a color management system, no profile will be associated to the file. It is still possible to process the images by coupling them to a default input profile. En-

able the **RGB input profile if not embedded** box and choose the proper profile from the pull-down menu.

In this window the output profile is not shown, since it does not depend on the printer but on the paper, too. To view the output profile select

Calibration > **Media parameters**

The **Transfer function** window appears, as shown in fig. 100. In the **Media** menu is shown the paper model, in the **Color profile** menu is shown the printer CMS output profile.
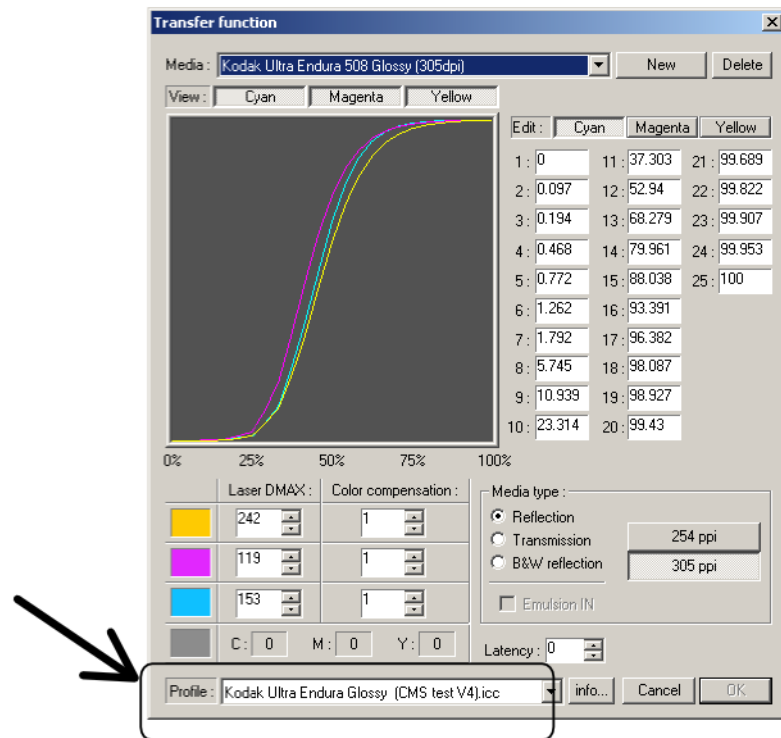
Fig.100 - Color profile in the Transfer function dialog

11.2.1 Manual mode options

In the **Manual mode** frame (**ColorMap CMS settings** window, see fig. 99 on page 102), one can choose in which way the system converts the newly opened files. the following options are available:

Ask when opening   It is the default option. The system requires the input profile each time a new image is opened. This cause the **Convert to profile** window (fig. 23 on page 30) to appear before opening the image.

Do not ask,
perform conversion   If enabled, applies the programmed profile to the newly opened image without confirm request.

Do nothing   Disables everything.

11.3 The ColorMap system

A **color map** is a conversion table from a color space to another one. The **ColorMap CMS** is a color management system based on the color maps.

This system has the advantage to be independent from any particular color conversion technology developed by single producers. The ColorMap model can manage a color conversion already available on the market, keeping and accurately reproducing its own features.

In **ImageLab 2.0***, color maps are intended to work with* **Autoprint** *and* **formats***. To each format can be assigned a different color map.*

11.3.1 Creating a color map

Attention: the following procedure requires an additional color profile conversion software, ***not included*** *in ImageLab.*

To generate a color map proceed as follows:
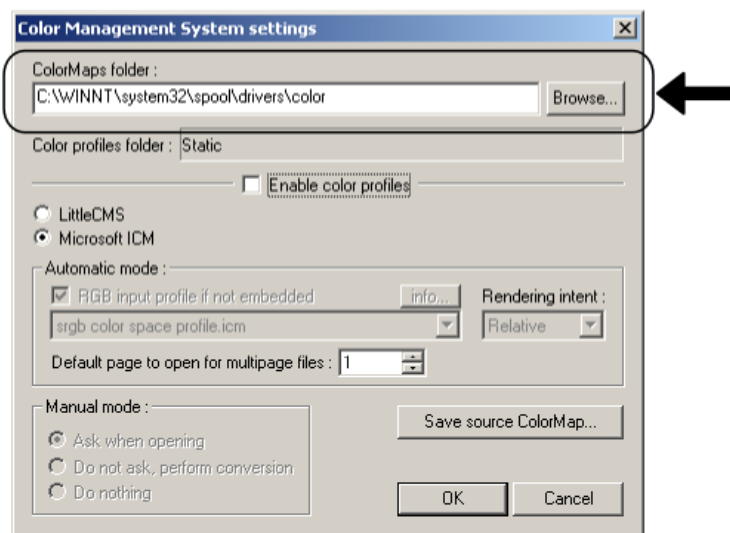
Fig.101 - Creation of a color map

1) Select

File > **Preferences** > **CMS settings...**

from the main menu bar. The **Color Management System settings** window is shown in fig. 101.

*Make sure that both the **Enable color profile** box is disabled (no check mark inside).*

2) The **Color profiles folder** box features the destination folder for the color maps. Use the **Browse** command to select or even to create the folder. The **Select directory** window appears, as shown in fig. 102. Use the **Create New Folder** command if necessary.
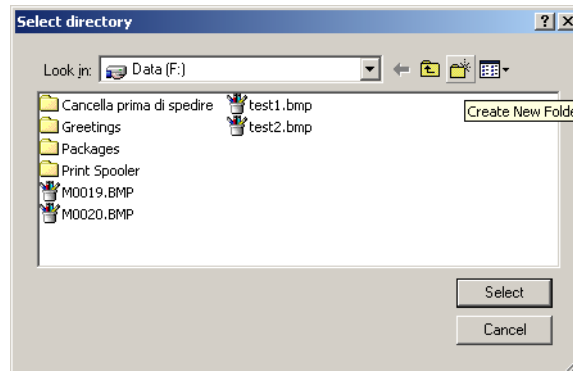
Fig.102 - Select directory dialog

The default folder for the color profiles is C:\WINNT\system32\spool\drivers\color *standard folder.*

3) To create a color map select again

File > Preferences> CMS settings...

In the **ColorMap CMS settings...** window of fig. 101 on page 104, select the **Save source ColorMap...** command. In the **Save as** window select the name and the destination folder of the color map. In the example of fig. 103, first the *ColorMapFolder* has been created, and then the *MyColorMap.bmp* file has been saved on it.
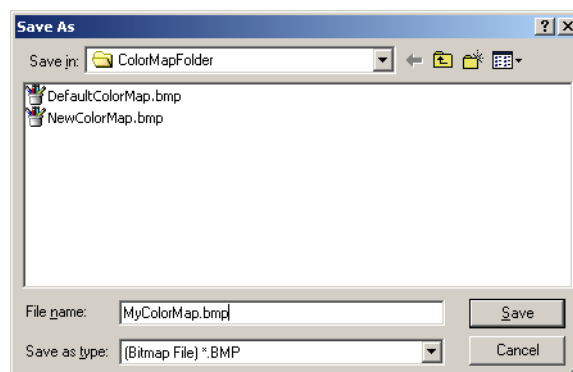
Fig.103 - Save as dialog

Attention! *It is necessary to add the file extension **.bmp** to the color map file name.*

After the **Save** command has been given, the ImageLab will request to choose between two color map quality levels: **Standard** and **High**.

4) Open the above defined color map with a software capable of color profile conversion (**not supplied with ImageLab**). Apply the desired color conversion (an example could be from the **sRGB** color profile to the **Kodak Digital III** one. Save the modifications on the color map file, keep it in the original folder.

5) To apply the defined color conversion to an image, open it in ImageLab® and select

   Image > **Convert with Colormap**

   in the main menu. The **Convert with colormap** window is shown in fig. 104. On this window one can select a color map from the list of the available ones (**ColorMap** pull-down menu).
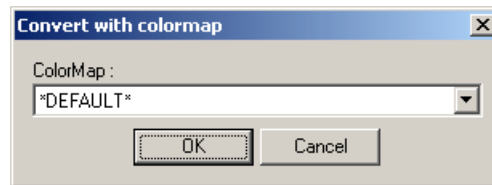
Fig.104 - Convert with colormap window

*The ***DEFAULT*** color map is predefined in Imagelab, the other ones are user defined.*

11.3.2 Binding a color map to a format

To bind a color map to a print folder proceed as follows:

1) Open the **Color Management System settings** window (fig. 99 on page 102) by selecting:

   File > **Preferences** > **CMS settings**

   from the main menu.

2) Uncheck the **Enable color profiles** box (no check mark inside).

3) Close the window with the **OK** command.

4) Select

   File > **Image processor** > **Formats**

   from the main menu bar, to let the **Format setup** window (fig. 77 on page 82) appear.

5) In the **Effects** frame, shown in fig. 105, select the **ColorMap** box and choose the desired profile in the pull-down menu.
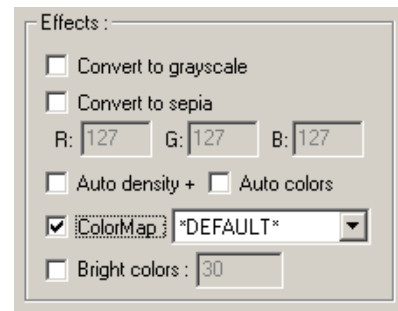
Fig.105 - Effects frame

6) Close the window with **OK** to confirm the modifications.

12 Error messages and system diagnostics

12.1 The message window

When an error in operations occurs, on the lower left corner of the screen the following window appears (fig. 106):
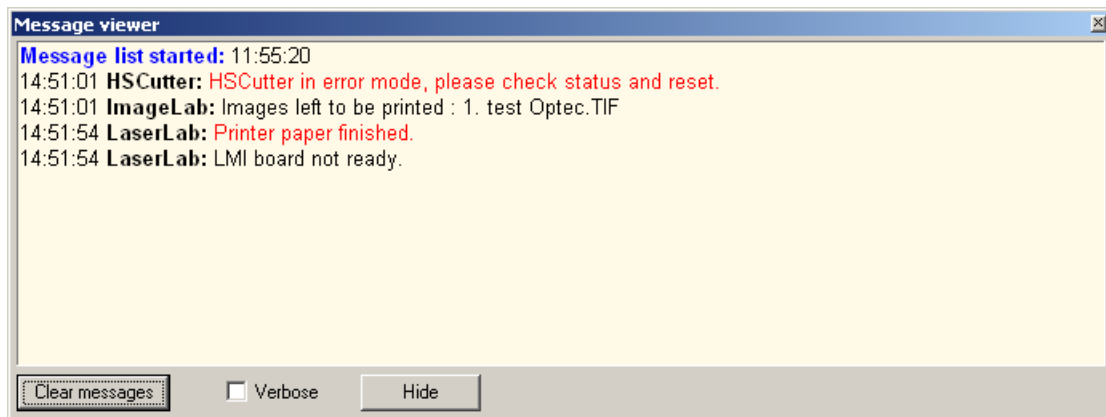
Fig.106 - Message viewer window

This window is called the **Message viewer**. All the message from LaserLab are stored here. For each message is indicated the time when it was generated, so one can trace the machine errors history. The blue writing gives to time when LaserLab began to send the messages. The red writings are related to the error that stopped the operation, the black ones are service and information messages.

The text inside can be selected with the mouse and copied (press together the **Ctrl** *and the* **c** *key). Once copied, it can be pasted (press together the* **Ctrl** *and the* **v** *key) to a text editor (*Windows® Notepad *for example) or directly in a e-mail message. This could be useful to communicate to a service center what is going wrong with the appliance.*

To close the window select the **Hide** command. The window can be opened again in every moment by selecting the

View > **Message window**

menu item.

To clear all select the **Clear messages** command.

12.2 Error messages

In the following are shown the most frequent error messages from ImageLab software. Some of these are shown in the **Message viewer** window immediately after ImageLab has been launched. Some others messages appear only because of a print attempt in anomalous conditions. In this last case one after another will appear:

1) The error message, indicating the cause of anomaly;

2) The message **Images left to be printed,** the number of the images left to be printed when the error has occurred.

Attention! These images are lost, they need to be launched again after removing the error cause.

Linear motor failure	Either linear motor driver is not supplied, or is in alarm state. When error condition is verified, the message is shown as soon as ImageLab is launched. Driver state can be read watching the two LEDs (red and green) on the top of it. If driver is not supplied they are both off: this could happen if the pressure switch detects a pressure lower than 1.8 atm. (see fig. 8 on page 17): increase pressure by acting on pressure regulator. If only the red led is on, the driver is in alarm state. The driver could have received a disabling signal from the electronic control board inside the machine: in that case, please call an authorized service center.
Blue Laser off (Work Enable off)	Both blue laser and rotating mirror motor are off. To set the correct working, select

Calibration > **Advanced**

and then **Work Enable**. After this, if the problem is not solved, please call an authorized service center.

Printer paper finished	There is no paper detection in input of the transport. Among the possible causes there could be:

1. Paper finished: change the paper box.

2. There is paper in the box, but it's not correctly loaded.

In both cases we suggest to read 7.4 "Loading Paper" on page 54.

LMI Board not ready

This message could appear together with **Printer paper finished** if a print have been launched without loading the paper. It means a fault in synchronization for LMI unit. In this case just load correctly the paper.

If error conditions are different from the ones above mentioned, please call an authorized service center.

**Printer paper
not in developer**

The paper hasn't been reached the paper processor input after the printing process.

This message could be shown together with **Printer paper finished**. In this case just load correctly the paper.

Other error causes: the paper is not correctly kept close to the carpet, or the processor paper input is not aligned with the printer paper output. In both cases, please call an authorized service center.

Printer paper locked

The paper has reached the paper processor, but it is locked near the its input. Typically, some prints have been launched the paper processor being off. This means that the first print has stopped at the processor paper input. When the second print is finished, the system doesn't succeed in carrying the second copy in the paper processor and sends the error message. Switching on the paper processor ensures correct operation completing without any loss of prints.

Linear motor in progress

A print has been launched in the first two-three minutes after the switching on of the system, before the correct completing of its own starting sequence. This print has been lost, try again after some time.

Printing in progress

The second copy of the current image was launched during the processing of the first copy. The second copy is lost, try again after some time. To avoid this problem we suggest to use multiple prints option (6.4.2 "Multiple prints" on page 33).

Autocalibration failed

The system isn't able to complete its own automatic calibration procedure. This message could appear even there isn't any image being printed: autocalibration is automatically repeated every five minutes. Among the possible causes there could be:

1. The paper box isn't correctly selected in **Calibration > Paper box** window (fig. 49 on page 51). In this case give the command

Laser printer > **Load paper**

(see par.7.4 "Loading Paper" on page 54). The box will be automatically matched with the related paper format.

2. One of the three lasers is damaged, or switched off. Switch off the printer and check the electrical connection (see 4.4 "Electrical connections" on page 14). After this, if the problem is not solved, please call an authorized service center. Is to be noticed that this situation is immediately seen in print quality, before getting the error message.

12.3 Log files management

In the Log files are registered some of the system activities. These files can be useful in diagnostics or in keeping trace of the works done.

Select

File > Setup > Log files settings...

from the main menu bar. The **Log file options** window appears, as shown in fig. 107.
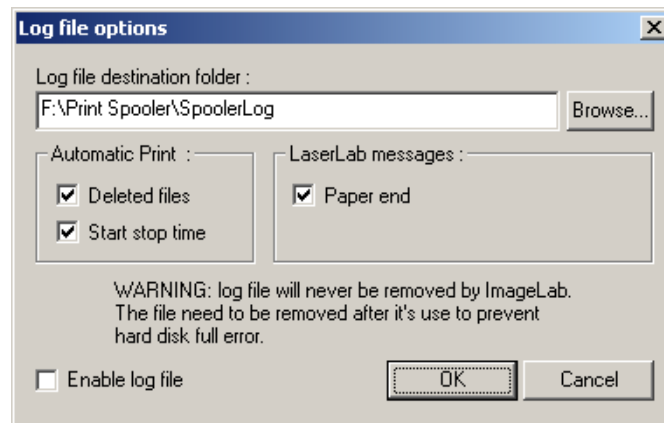
Fig.107 - Log file options window

In this window it is possible to select the files destination folder (**Log file destination folder** menu). The option are all selected by default, we suggest not to modify this setting. Select **Enable log file** to enable the writing of the files on the destination folder.

Attention: the Log files are never removed automatically by the ImageLab. We suggest to remove them each time the work is finished, to avoid to fill up the hard disk space during the machine life time.

13 LaserLab 76 (30")

13.1 Using the 50 (20") paper box on the LaserLab 76 (30")

The fig. 108 shows respectively the lever position for the two boxes.

**POSIZIONE
BOX 76 (30")**
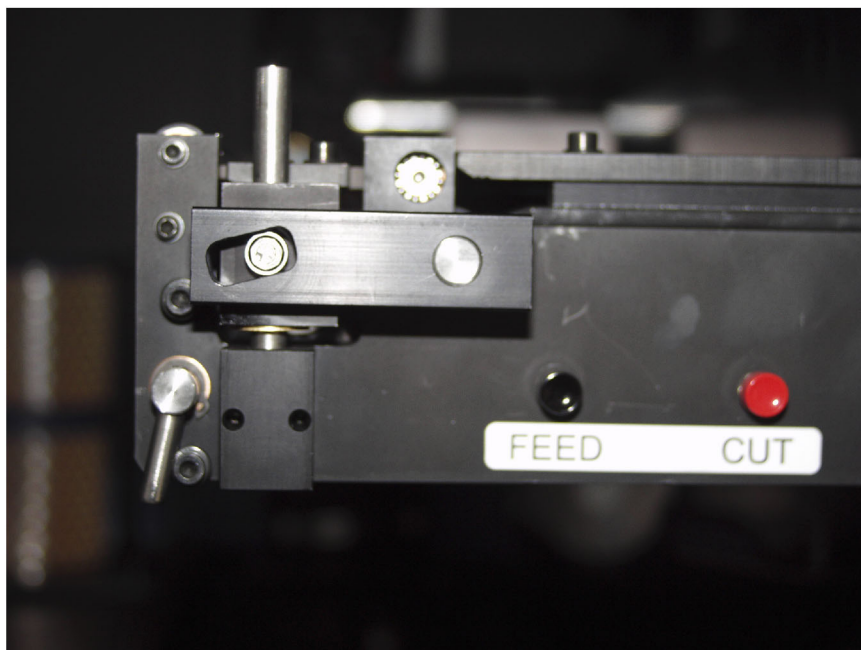
**POSIZIONE
BOX 50 (20")**
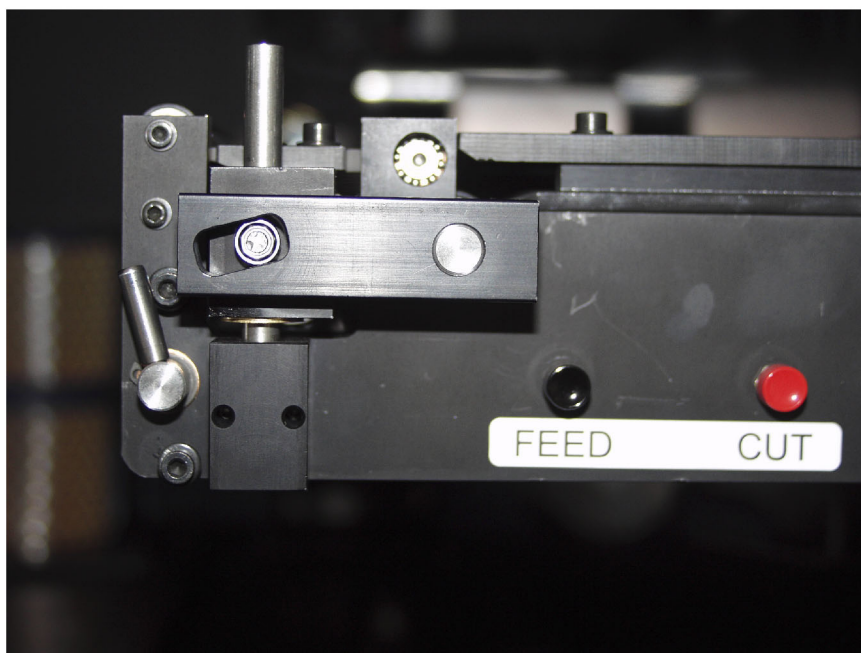
Fig.108 - Selecting the paper box on LaserLab 76 (30")

⚠️ ***Attention! Position the lever BEFORE inserting the box.***

When a LaserLab 50 box is used, the automatic box detection is disabled. By default, every box is detected as number 1 box.

💡 *It is always possible to load in the 76 box every paper band, from the 50 (20") to the 76 (30").*

13.2 Managing rolls winded with emulsion inside (LaserLab 30")

💡 *We suggest to use:*

1) The rolls with emulsion **outside** for every band.

2) The rolls with emulsion **inside** can be used only for the **76 (30")** band.

3) For not paper based media (Trans, Clear, Flex Metal, etc.) use **exclusively** rolls winded with emulsion **outside**.

When the ImageLab is running, select: **Calibrations** > **Media parameters**
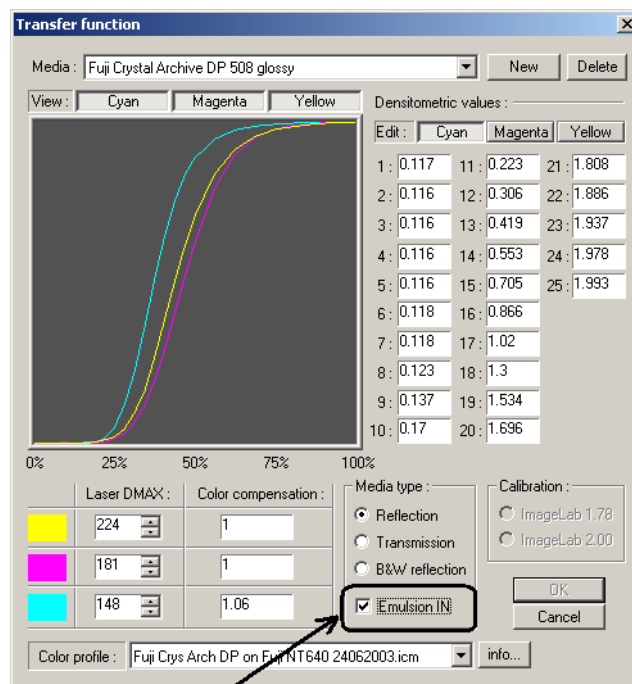
Fig.109 - Selecting the media for Laserlab 76 (30")

In the **Transfer function** dialog of fig. 109 the **Emulsion IN** box is highlighted.

When this option is selected, a mechanical device called bender is enabled, to perfectly fit the paper curvature to the printing exposition drum.

ATTENTION:

ALWAYS select the Emulsion IN *box to use rolls winded with emulsion INSIDE.*

- NEVER select the Emulsion IN *box to use rolls winded with emulsion OUTSIDE.*

14 HS Cutting Station

14.1 Description and warnings

The HS (High Speed) Cutting Station is a device for cutting the photographic paper.

HS Cutting Station can only be joined to the **LaserLab 50 (20")** *printer.*

The cutter is set and works **only with 508mm (20")** paper band. On each sheet sent to the cutter, the images must have all the same format. Different formats are allowed for different sheets.

If the format changes between one sheet and the subsequent one, a little delay is set to let the cutting blades change their position. No delay if there is no change of format between the sheets.

Attention: the cutting formats and references can only be generated through the **Imagelab v2.0** *or later versions. The cutter cannot be used together with older version of* Imagelab *or other software.*

Images and windows showed in this section come from **Imagelab v2.0** or later versions.

14.2 Installation

The HS Cutting station is independent from the other units. It is only necessary to connect the Cutting Station supply plug (220Vac) to one of the LaserLab UPS output sockets.
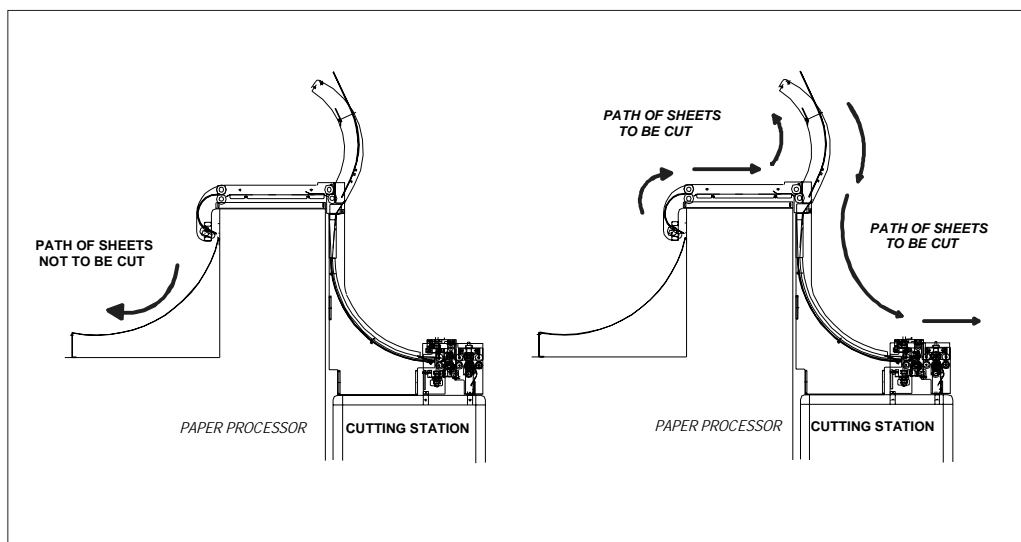
Fig.110 - HSCutting Station: managing the output sheets

If a sheet contains frames to be cut, it is brought to the processor rear side. The sheets with single images, or not to be cut are placed at the usual dryer output chute of the paper processor. The

two different paths are shown in fig. 110.

The installation steps are the following:

1) Rotate the fan placed over the processor dryer, as shown in fig. 111.

2) Mount the motorized transport unit. The positions of the mounting holes are shown in fig. 111.

⚠️ ***Respect the quotes in the figure!***

ROTATE 180°

VENTOLA ASPIRAZIONE VAPORI
STEAM SUCKING FAN

130   115   16   161,5

4,5   4,5   4,5

ALL 4,8x16 SELF-TAPPING SCREWS

VITI 4,8X16 AUTOFILETTANTI

586   820

445

4,5   4,5   4,5

130   115   16   72,5

PARTE SUPERIORE FORNO
DRYER TOP VIEW
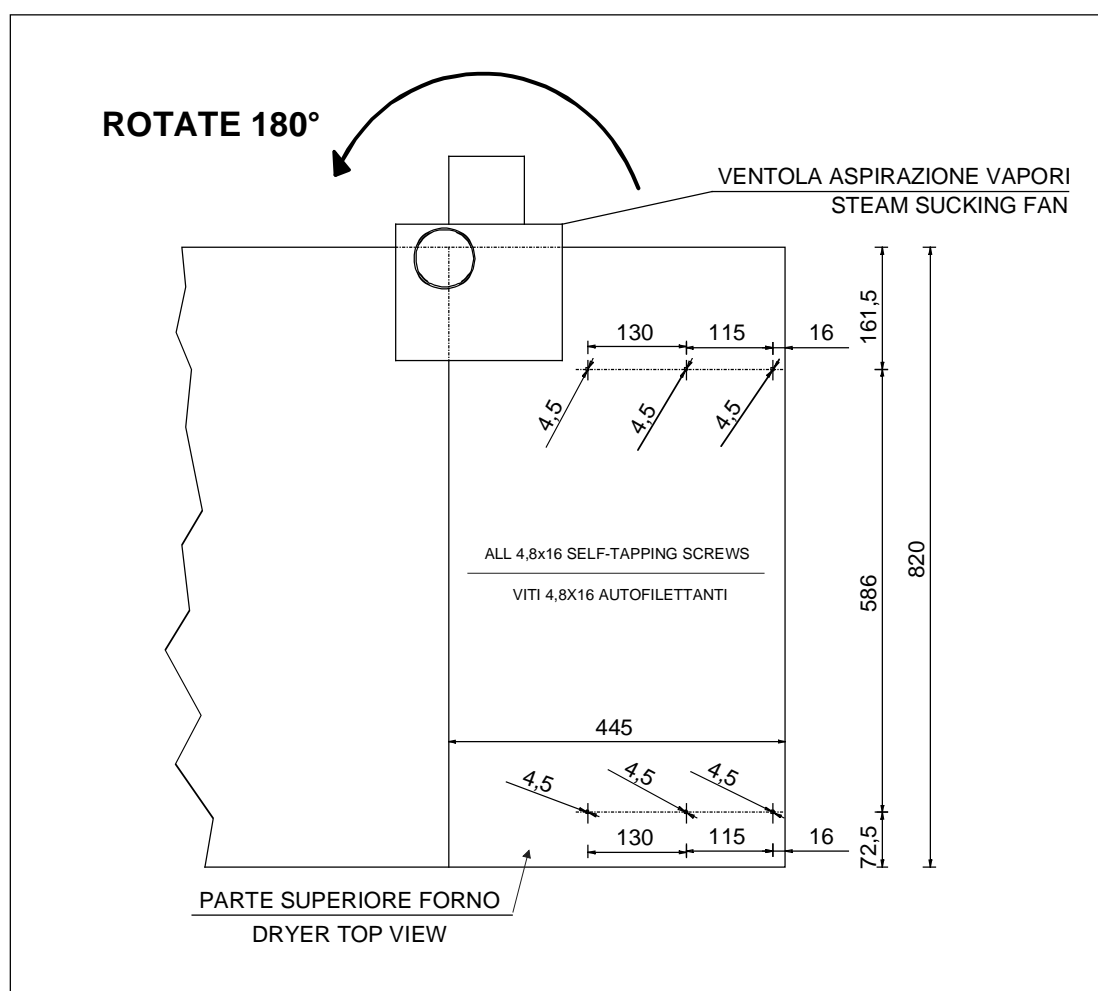
Fig.111 - Mounting the HSCutting Station

⚠️ ***ATTENTION. As soon as finished, verify that the copy stays exactly in the middle while passing through the transport unit.***

3) Mount the guide for reversing the copies.

4) Act on the HS wheels: bring the cutting station at the same level of the transport unit: in this

way it is possible to insert the knobs placed on the chute in the transport unit proper site (see fig. 112).
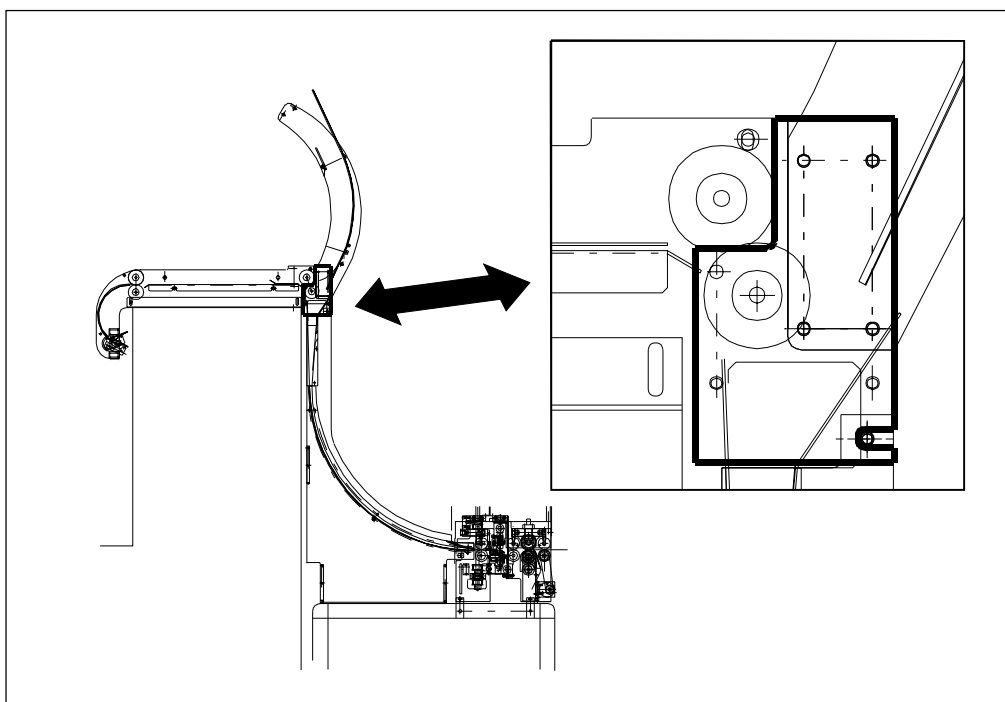
Fig.112 - Mounting the HSCutting Station

5) Lock the unit wheels through the proper lever.

6) Connect to the cutter the two connectors coming from the transport unit.

7) Connect the Cutting Station supply plug (220Vac) to one of the LaserLab UPS output sockets.

After having been switched on, the HS C.S. will start an automatic setup procedure with no need of operators.

14.2.1 Connecting the serial data to PCI adapter between the PC and the cutter

Install the PCI to serial port adapter board into the computer's motherboard. Connect the 4X serial port cable to the adapter output. See fig. 113.
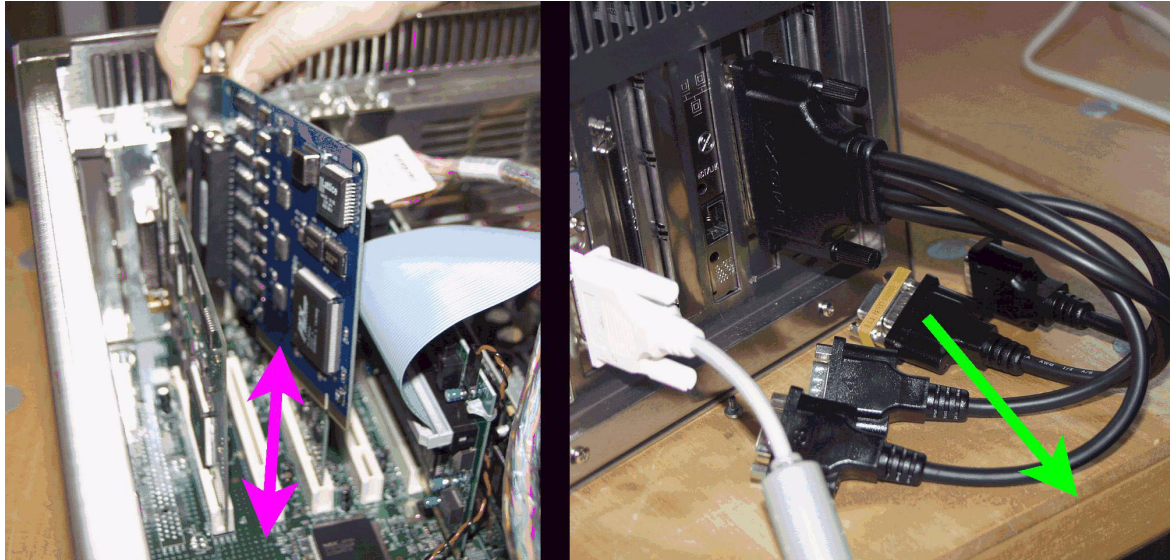
Fig.113

The serial connector numbered **1** and **2** have already fitted a 9-pin female-female adapter. The two connectors are reserved respectively for:

1.   Writing system (**COM3**)

2.   HS Cutter (**COM4**)

Connect the connector numbered **2** with the serial cable coming from the cutter.

14.3 Function keyboard and display

The keyboard and display are shown in fig. 114.
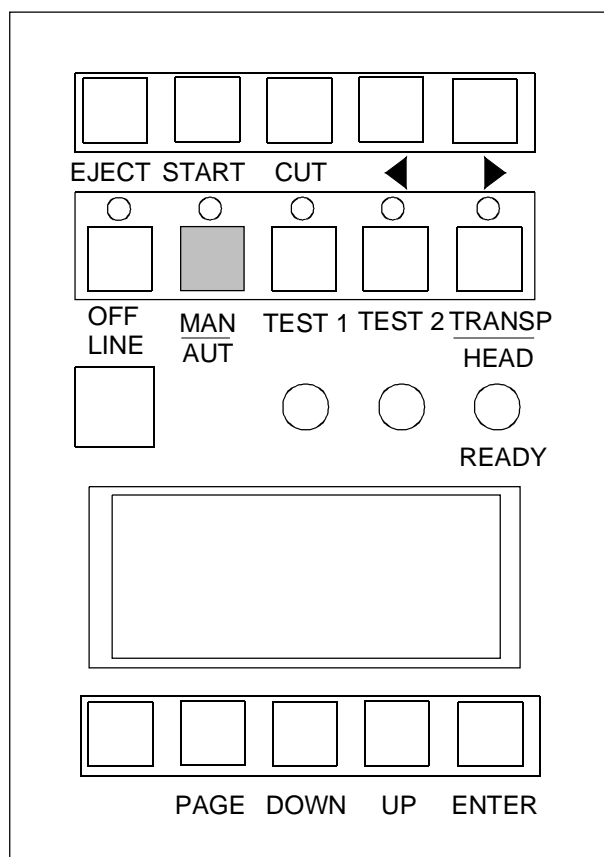
Fig.114 - HSCutting Station keyboard

When the cutter is ready, all the red LED*s placed on the buttons are off and the green* **READY** LED *is blinking. The message shown on the display is* HS CUTTER.

The function of each key is explained in the following:

EJECT	Press this button to eject of a copy not cut. The copy is not cut if it features neither cutmarks nor barcode.
ADV	Starts the cutting procedure if a copy with cutmarks and barcode is already present inside the cutter.
CUT	Makes a vertical cut.

Don't use this function during the usual work. Use it only to check the cutter motor.

>>	Moves forward the copy.
<<	Moves backward the copy
OFF LINE	Cuts off the communication between the cutter and the LaserLab computer unit (LED is ON).
MAN / AUTO	Disables / enables the automatic mode. If the LED is ON, the cutter is disabled and every sheet is brought to the usual dryer output. If the LED is off, the device starts automatically to cut the sheet, as soon as the latter one arrives to the cutter.

*The **MAN/AUTO** LED is on if some error has been detected (see also 14.9 on page 133). In this case the cutter is disabled. Press the **MAN/AUTO** button to enable the cutter again.*

TEST 1	Reserved for technical service. Don't use it during the normal work.

*If the **TEST 1** button has been pressed by accident, don't do any other thing but waiting the device to complete its automatic cycle. At the end, press again **TEST 1** and then **MAN/AUTO** to enable the cutter.*

TEST 2	Reserved for technical service. Don't use it during the normal work. Same as **TEST 1**.
TRANSP/HEAD	Reserved for technical service. Don't use it during the normal work. Same as **TEST 1**.
PAGE	Reserved for technical service. Don't use it during the normal work. Same as **TEST 1**.
DOWN / **UP**	Reserved for technical service. Don't use it during the normal work. Same as **TEST 1**.
ENTER	Alarm reset and global system restore. See also 14.9 "HSCutting Station MSA" on page 133.

14.4 Mode of operation

The cutter is supplied with 4 mobile blades for horizontal cut (**X** axis) and one blade for vertical cut (**Y** axis). See fig. 115 on page 123 for more details.

The 4 blades for horizontal cut can divide the 508mm band into 5x102mm, or 4x127mm, or 3x169mm, or 2x254mm bands. All the formats based on these bands are cut with no waste of paper, except for the sheet header (which is necessary to drive the cutter) and the blades thickness.

The thickness of the horizontal blades are: 5mm for the middle one, and 3mm for the other three.

The thickness of the vertical blade is 3mm.

The number of vertical cuts and the spacing among them are depending on the chosen format. For example, one cut every 10cm if the format is 10x10, or one cut every 15cm if the format is 10x15.
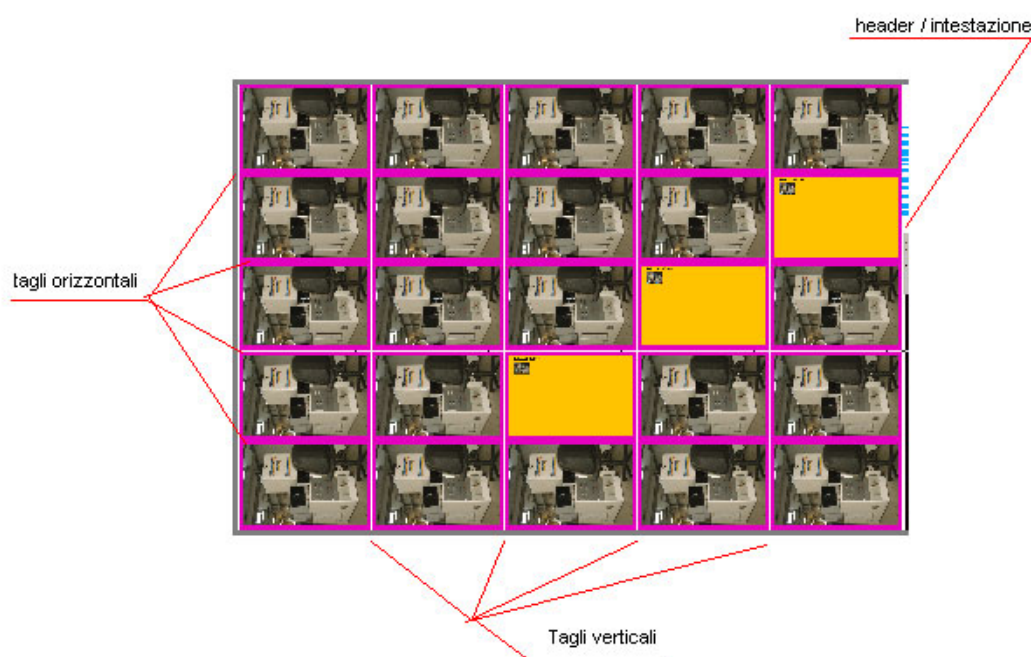
Fig.115 - HSCutting Station mode of operation

In the following table there are some examples of formats being cut with no paper waste:

BAND	WASTELESS FORMATS
102	10x10 - 10x13 - 10x15 - 10x20
127	13x9 - 13x13 - 13x18 - 13x20
254	25x20 - 25x25 - 25x38

All the formats included in the 508 band are allowed. The formats not mentioned in the table could produce waste of paper: for example, cutting the 24x18 or 24x30 formats will produce a 20mm waste for every sheet. All the copies will be cut and refined without white borders.

14.5 LaserLab setup for HSCutter

To let the printer and the cutter work together, it is necessary to set some parameters in the **Hardware setup window** shown in fig. 116.
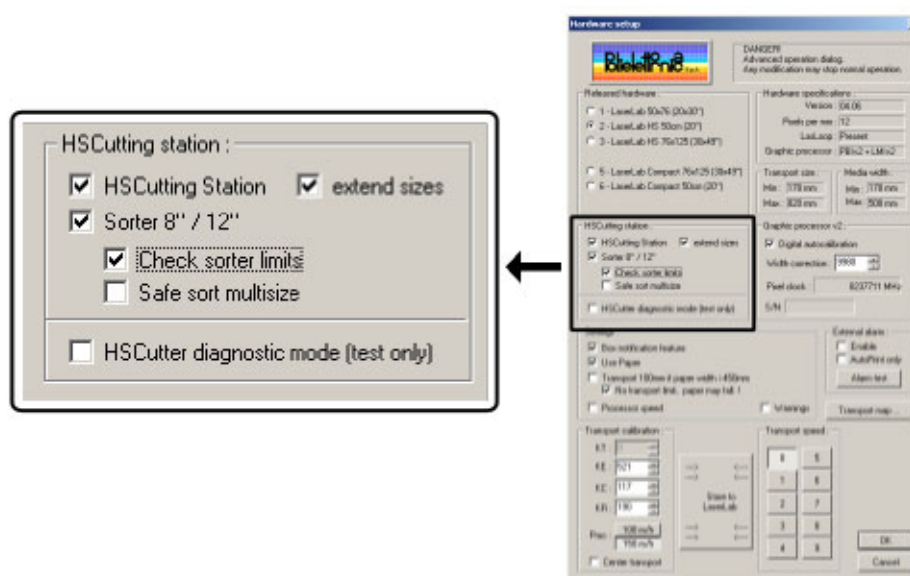
Fig.116 - Hardware setup window: settings for HSCutter

Attention: the use of the Hardware setup window parameters is reserved to service personnel only.

Press the keys **CTRL** + **ALT** + **SHIFT** + **C** to let the window appear. Find the frame **HSCutting station** inside the window.

The settings must be the same of the ones shown in fig. 116.

14.6 Using the HS Cutter

The cutter can be used in two ways:

In the **automatic** (default) **mode** the work flow is totally under control of the Imagelab software. It automatically detected which sheets have to be cut or simply brought to the front chute.

In the **manual mode** it is possible to select manually to destination of each sheet: the cutter or the dryer output chute.

14.6.1 Automatic mode

This is the default mode. When the system is switched on, the Imagelab software takes control of the cutter and checks its state.

The cutter must be switched on. The LEDs **OFFLINE** *and* **MAN/AUTO** *on the keyboard are both off.*

Fig.117 - Processor status dialog

For each sheet, Imagelab selects to ones to be cut (presenting barcode and cutmarks) and to one to be brought to the front chute with no cutting.

It is possible to know in every moment the processing state of one's order. Select the icon shown above (processor status button). The **Processor status** dialog shown in fig. 117 will appear.
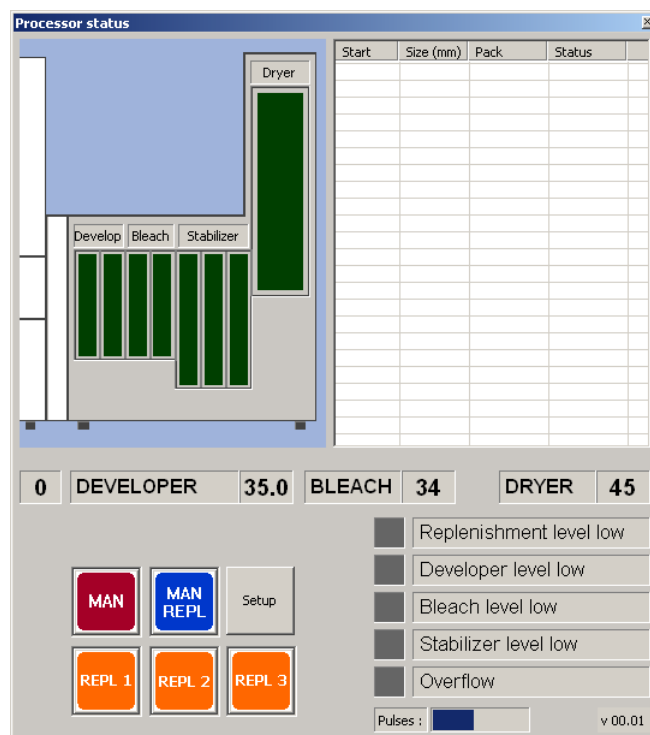
The red colored tanks show where the copies are currently placed. The table shows the sending time of the copies, their length and size, and the current position inside the processor. If the **Pack** column shows **HSCutting**, the copy is to be cut. The copies not to be cut are marked with **none/other**.

Attention: if the deflector changes its position in the wrong moment, act as follows:

Keep the mouse pointer over the processor picture shown in fig. 117, and click the right button.

The **Processor setting** dialog (fig. 118) appears. In this window it is possible to modify and cor-

Fig.118 - Processor settings dialog

rect the processing time of each single copy. The normal time is 3'30" (210 seconds), corresponding to a 45" developer time. Modify this value if the deflector moves at the wrong moment.

It is to be considered normal a deflector movement after the copy is out for 20 - 30 cm. Press **OK** once finished.

14.6.2 Manual mode

To switch to manual mode press the **OFF LINE** key (see section 14.3 on page 121). In this state one can manually separate the copies to be cut, from the others to be simply brought to the front chute. Simply press the **MAN/AUTO** button on the keyboard.

When the **MAN/AUTO** *LED is off (***AUTO** *function enabled) it is possible to insert manually the copies in the cutter. The copies must feature cutmarks.*

14.7 Autoprint and format settings for HS Cutter

Select the

File > **Image processor** > **Autoprint**

menu item.

To let the **Autoprint folder list** dialog appear (fig. 119).
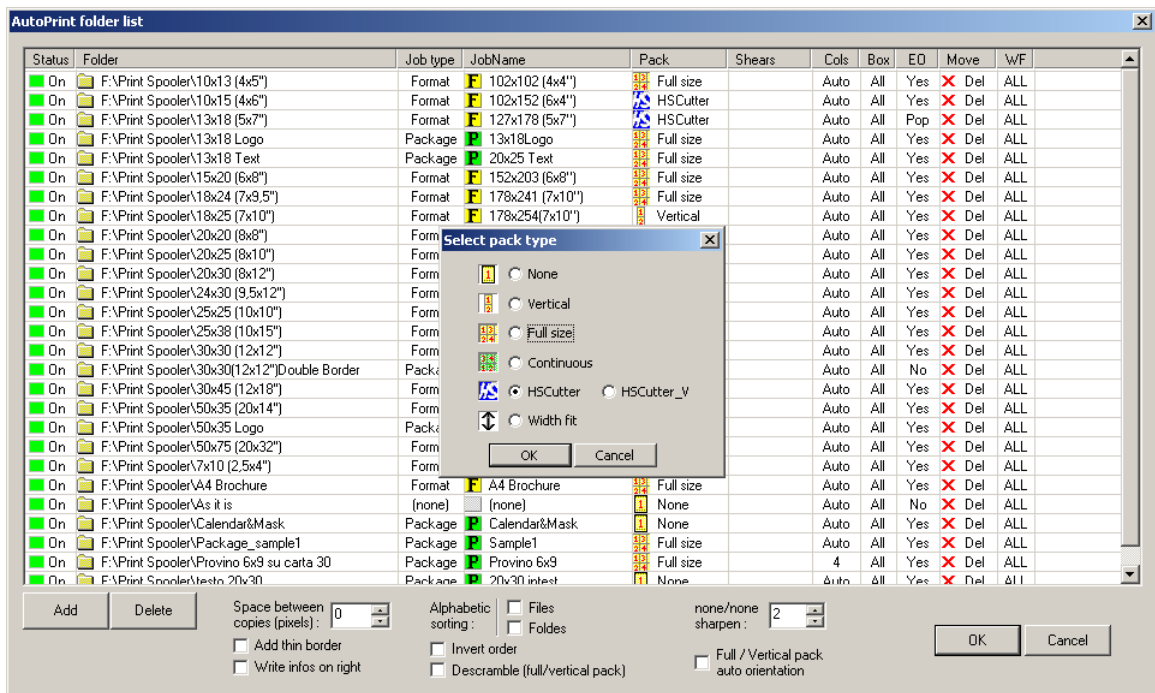
Fig.119 - Settings formats for HSCutter

Each row is a print folder. The column **Pack** shows which pack has been matched to that folder.

To change it, double-click on the pack to let the **Select pack type** dialog appear, as shown in the middle of fig. 119. The five available options are: None, vertical, Full size, Continuous, HSCutter.

HSCutter   Select **HSCutter** and then **OK**. The pack will be shown in the box.

Now, to select the format, double-click on the format box. The **Format setup** dialog window will be shown (fig. 121 on page 128). Select the desired format and give **OK**. Once finished, give **OK** in the **Autoprint folder list** window (fig. 119) to confirm the modifications.

14.7.1 Wasteless HSCutter formats

Refer to the **Format setup** window, shown in fig. 121 on page 128.

Look at the frame placed about in middle and called **Special Attributes**. The frame is shown in fig. 120.

Select the box **HSCutter divide** and the **5** box. Then give the **Apply** command in the **Format setup** window (fig. 121).

Fig.120 - HSCUtter formats

Fig.121 - Format setup window

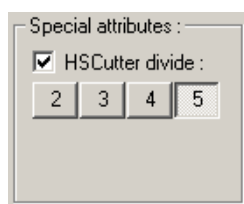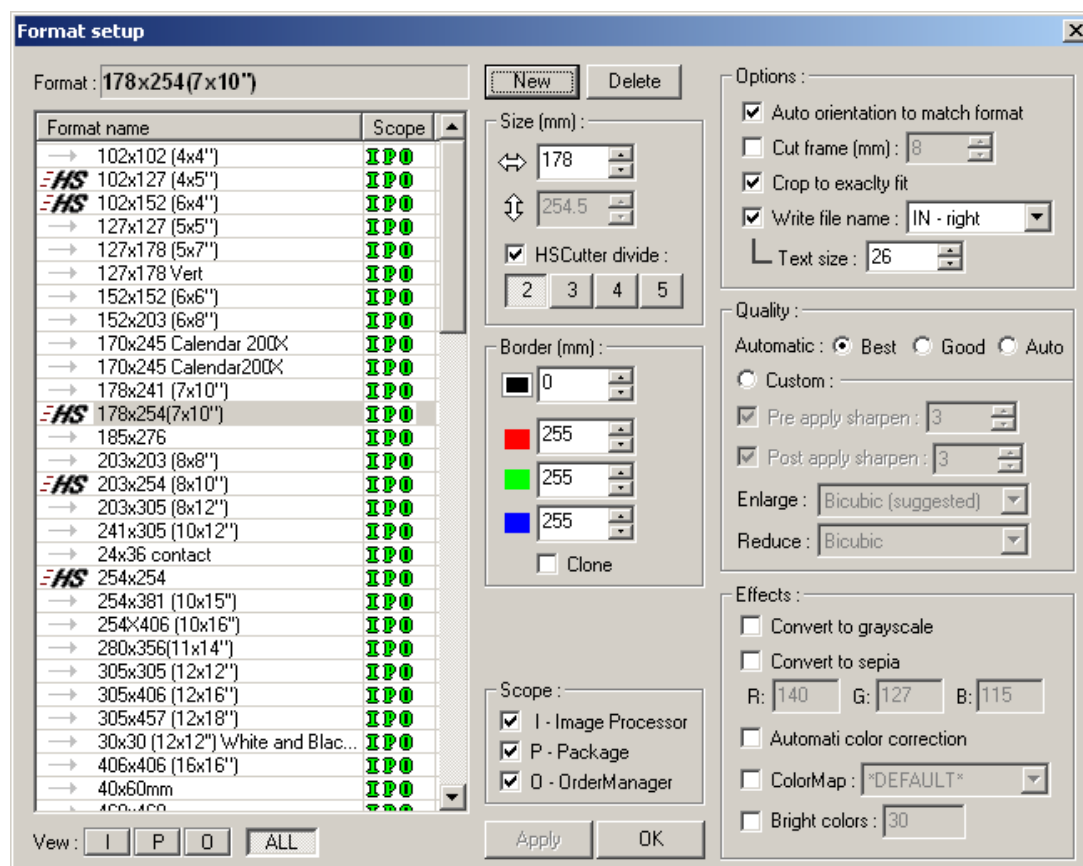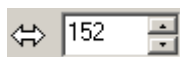Now the box for setting the format height is disabled. The height of the copies has been calculated automatically, since the band has to be divided in five parts horizontally. The height is 50cm / 5 bands = 10 cm.

The box for setting the format length is still enabled, to let the user customize the current format. In this situation it is possible to set for example 10x10, 10x15, etc.

Once the format has been set, confirm with **OK**. Going back to the **Format setup** dialog, the pack box will be marked with **HS** to record that the images of that format will be sent to the cutter.

Attention: the effective paper format must be exactly set up to ensure the correct cutting position.

The paper declared 508mm (20") is a little narrower, usually 507 - 508mm. Set this parameter in the

Calibration > **Paper box**

Dialog. We suggest always to verify the correct format of the paper roll. Just tune the **Paper box** parameter, and the formats involved will be automatically corrected.

14.7.2 Wasting paper formats

The "not HSCutter" formats are allowed, too. In that case the band is not exactly divided in sub-bands. The requested format are arranged into the sheet to minimize the waste of paper.

Attention. Every format to be sent to the cutter (both HS *and* not HSCutter*) is limited in length.* **The maximum allowed length is 420mm***, over that the device gets wrong in cutting the paper.*

14.8 Placing manually the blades: Shear simulator

The HS Cutting Station Shear simulator allows to place manually the blades. In this way the cut is not dependent from the format.

This is useful when the print layout has not been generated from ImageLab*, but has to be printed and cut on the* LaserLab*. It is also useful when it is needed to print and cut a package with all the images in only one column.*

Select

File > **Image processor** > **HSCutter Shears**

To let the **HSCutter Shear simulator** window appear, as in fig. 122.
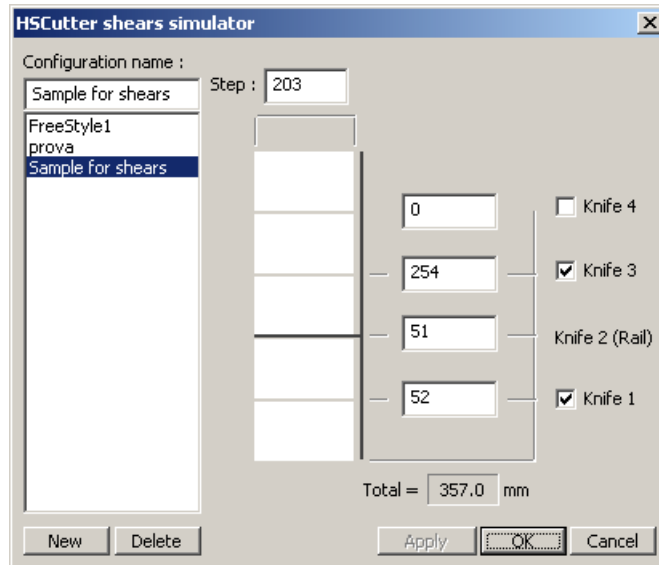
Fig.122 - HSCutter shears simulator dialog

The values in the figure are related to the "Sample for shears" package. To generate that package, first open an image and then select:

Image > **Generate package**

from the main menu. In the **Process package** window (fig. 56 on page 62) select the "Sample for shears" item.

See section 8.2 on page 59 for further details about packages.

The whole resulting image is a **203x507mm** size, including the images:

nr. 1   **15x20** horizontal;

nr. 1   **20x25** vertical;

nr. 3   **5x7** horizontal B&W;

nr. 3   **5x7** horizontal.

An example is shown in fig. 123 on page 131.

It is requested to cut the package as shown in fig. 124 on page 131. The first parameter to set in the window is **Step** to **203**, giving the transport length.

Attention: if this value is wrong, the vertical cuts (Y) *will be placed incorrectly.*

Fig.123 - Sheet to be cut

Fig.124 - Cut sheet

Then start from **the bottom** of the image:

1) Place the first knife to cut the three little color images. So **Knife 1** is **selected** and its value is set to **51**.

2) The value for **Knife 2**, cutting the three little B&W images, is **51** too. Note that this knife is **always selected**, as gives the reference for the other three.

3) Finally, **Knife 3** has to cut the big vertical image, so it is **selected** and its value is set to **254**.

4) **Knife 4** is **not** selected, as it does not cut anything in the example.

The **Total** field gives the height of the whole image (**357mm** in the example). Give the **Apply** command to confirm what done and then **OK** to close the window.

14.8.1 Limitations in use

When working in automatic mode the formats are placed to respect the following limitations:

1. The **Step** (transport length) range is **from 89mm to 400mm**.

2. **Knife 2** must be placed in the first half of the cutter (508/2 = 254mm). Please note that **Knife 1** position is measured with respect to the origin, while **Knife 2** position is measured with respect to **Knife 1** position. So, in the window the above condition becomes:

   Knife1 + **Knife2** <= **254**

3. It is not possible to cut or trim formats less than **8mm.**

14.8.2 Shears simulator and Autoprint

See section 9.3 on page 71 for further details about Autoprint *folders.*

To match an Autoprint folder to the shear simulator operate as follows:

1) Select

   File > **Image processor** > **Autoprint folders**

   menu item. The **Autoprint folder list** dialog of fig. 66 on page 72 appears.

2) Create a new folder as described in section 9.3.13 "Creating or deleting an AutoPrint folder" on page 79.

*Attention: it is not possible to match a Shears Configuration to a folder having the **HSCutter** enabled in the **Pack** column.*

See section 14.7 for further details.

3) Select the row of the new folder. Double-click on the **Shear** column. The **HSCutter Shear simulator** window appears, as in fig. 125.

4) Select an existing configuration from the **Configuration name** list.

5) If a new configuration needs to be created, select **New**. Introduce the values for the knife positions and the transport as above described.

6) Confirm with **OK**, either an existing configuration has been chosen or a new one has been created. The Configuration name appears in the **Shears** column.

7) Give **OK** in the **Autoprint folder list** window.

To disable the shears configuration of a folder, double-click on the **Shears** column in the **Autoprint folder list** window. The **HSCutter shear simulator** window now features the **Disable** button, as shown in fig. 125. Press it and give **OK** to disable the current shears configuration.
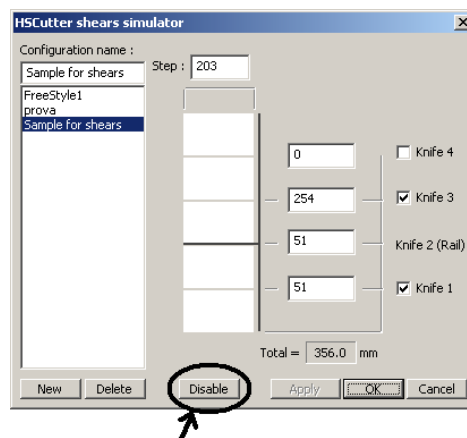

Fig.125 - Disable button

14.9 HSCutting Station MSA

HSCutting Station MSA is a standalone cutter that does not connect to **LaserLab**.

The settings for the cutting is made through ImageLab® (see previous sections). To activate the cutter, just introduce the sheet to be cut with the proper cutbars, the equipment will drag the sheet and cut it following the desired settings.

14.9.1 Keyboard and display

This cutter is equipped with the same keyboard and display of the in-line **HS Cutting Station**. For further details, see section 14.3 "Function keyboard and display" on page 121.

### 14.9.2 ImageLab® settings and end order management

To set the cutting parameters, it is necessary to access to Hardware setup dialog through the combination of keys **ALT**+**CTRL**+**SHIFT**+**C**.

> ⚠ ***Attention: the Hardware setup window tuning is reserved for service personnel only.***

In the Hardware setup window, the frame of interest is the one named **HSCutting Station** (see fig. 116 on page 124).

Two possible settings are available:

Fig.126 - HSC MSA (normal)
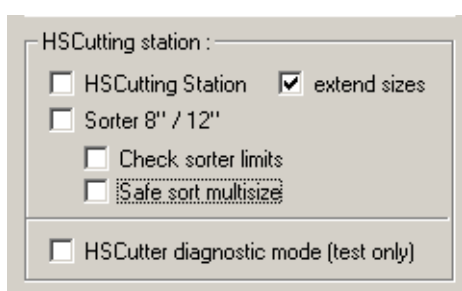
With the settings shown in fig. 126, the **LaserLab** will cut the sheet exactly at the end of each order. In this way it is not possible for one single sheet to feature more than one order. On the other hand, one single order can occupy more than one sheet. Refer to the progressive number marked on each sheet to gather the order.
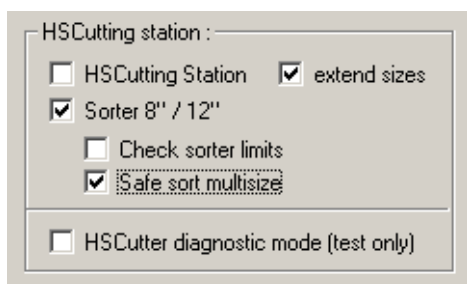
Fig.127 - HSC MSA (EndOrder)

With the settings shown in fig. 127, the LaserLab will always try to cut the longest possible sheet. In this way, one single sheet could feature more than one order. When the cutter meets an EndOrder, it stops and its pushbutton begins to blink, to let the operator gather the images of the order.

Press the button to start again the cutter with the next order to process.

The latter mode of operation ("EndOrder") needs one more setting through the cutter keyboard (see section 14.3 "Function keyboard and display" on page 121). Though the **PAGE** key, reach the page shown in fig. 128:
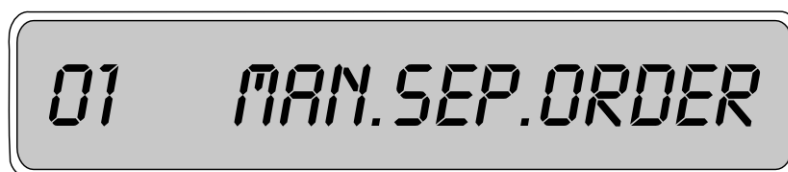

Fig.128 - Display page for HSC MSA

The value of the *MAN.SEP.ORDER* must be *01*. If it not so, modify it through the **UP** and **DOWN** keys and confirm through the **ENTER** key.

14.9.3 Guides for the input formats

It is possible to set the input paper band by adding the proper guides supplied with the cutter, as shown in fig. 129 on page 135. The figure is referred to a 76 (30") model.

To use the **76 (30")** format, no guide has to be mounted.

To use the **50 (20")** format, the two guides **(1)** have to be mounted.

To use the **40 (16")** format, the guides **(1) + (2)** have to be mounted.

To use the **30 (12")** format, the guides **(1) + (2) + (3)** have to be mounted.
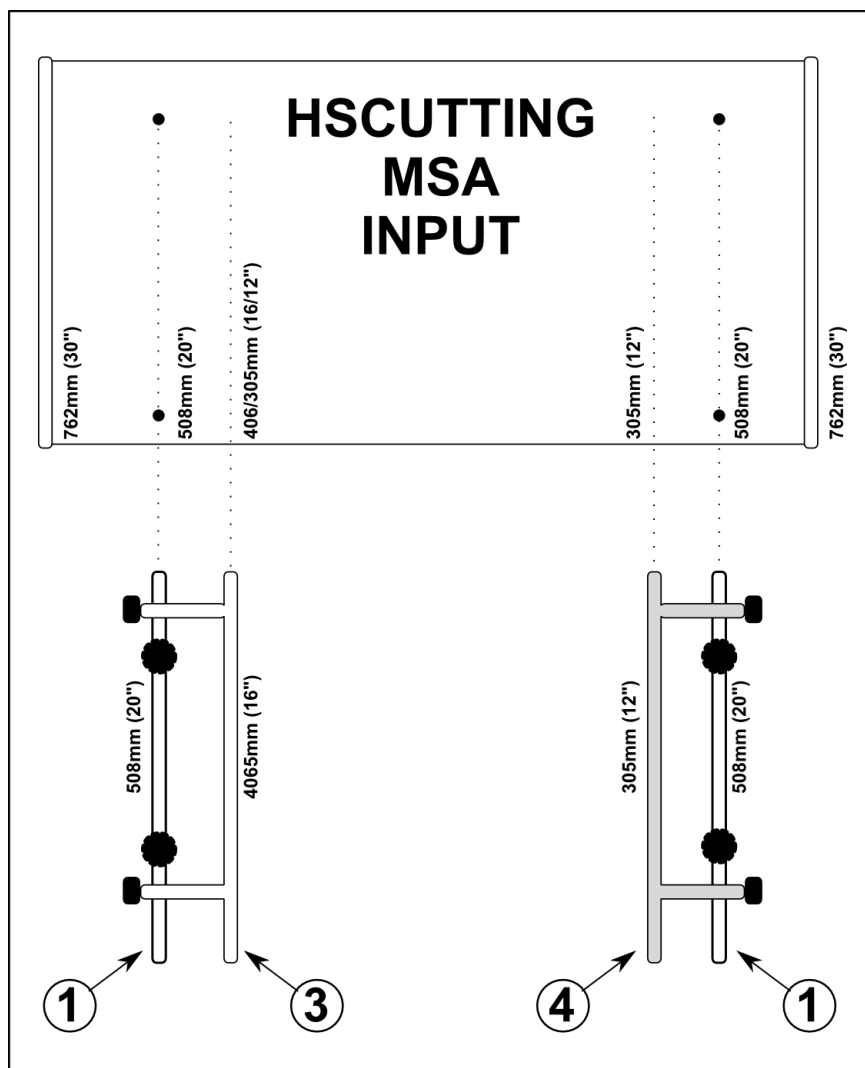
Fig.129 - Guide positioning for HSCutter MSA

14.10 Error messages

The following messages can be displayed both on the **HSCutting Station** *and on the* **HSCUtting MSA** *display.*

HEADER LINE FAILED   The introduced copy does not feature any cutmark, or the present cutmarks have not been detected. Press **EJECT** to eject the copy.

BARCODE ERROR   The barcode is not readable, the cutter does not detect the format.

HEADER MARK ERROR   The marker for positioning the horizontal blades is missing.

In presence of one of these errors, verify the following:

- The copy is set for cutting.

- The images are centered on the paper.

- The cutmark is actually printed on paper (the image could be too big for that format).

- The copy is obscured.

PAPER OVERLAP   A new sheet has arrived to the cutter input while the cutter was processing an old one. Remove the copy with the **EJECT** key and launch again the print.

CUTMARK FAILED   The internal sheet marker is missing and it is not possible to complete the cutting operation. Press **EJECT** to remove the copy.

14.11 Error conditions

An obscured or damaged copy can cause an error when enters the cutter (see section 14.9). To restore to cutter to the original state operate as follows:

1) If by mistake a copy not to be cut has arrived at the cutter input, just press the EJECT button on the keyboard: The copy will exit within few seconds with no cut.

2) If the copy features the cutmarks, press the **MAN/AUTO** button (see section 14.3 on page 121). If the header is normal, the sheet will be cut. Otherwise, press the **EJECT** button.

In case of error the Imagelab **Autoprint** *function stops immediately. Each copy will be brought to the front chute.*

To restore the **Autoprint** function act as follows:

- If the copy that have caused the error is still in the cutter, press **EJECT**.

- Press the **ENTER** button to cancel the error message on the display.

- Press the **MAN / AUTO** to restore the automatic operation mode on the cutter.

Press the **Reset** button in the main bar of Imagelab software.

In case of **not reversible error** act as follows:

- Cut off the cutter supply.

Press the **Reset** button in the main bar of Imagelab software.

From now on all to copies will be brought to the front chute.

Contact an authorized technical service center.

15 Managing multiformat orders: OrderMakerMF®

15.1 The OrderMakerMF® software

OrderMakerMF® is a software capable of managing orders including different formats in themselves (multiformat orders). It is not included in the normal supply of **LaserLab**, since it is necessary to purchase a separate licence.

One licence of OrderMakerMF® *is supplied for free when purchasing a* **HS Cutting Station***.*

Once purchased a licence, there are no limitations on the maximum number of PCs OrderMakerMF® can be installed on. It is possible to install it on every PC connected to a **LaserLab** printer through a network.

All the way, to avoid net overload, we suggest not to install the program on more than 5 PCs *connected to same network.*

15.2 Network settings for a correct use of OrderMakerMF®

Before installing the program it is good to make some checking over the network of **LaserLab** printers.

15.2.1 Checking the IP address for the LaserLab printers

The following procedure must be accomplished for every **LaserLab** *printer in the network.*

1) Click with the right mouse button on the icon called **My Network Places** over the desktop.

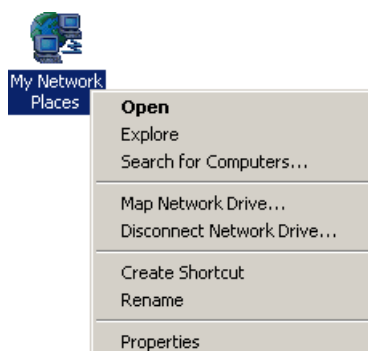Select **Properties** from the pull-down menu (fig. 130).

Fig.130 - My Network places

2) The window **Network and dial-up connections** appears. Click with the right mouse button on the icon **Local area connections**. Select the **Properties** item from the pull-down menu to let the window **Local area connection properties** appear (fig. 131).

We suggest to disable the **NetBEUI** *protocol.*

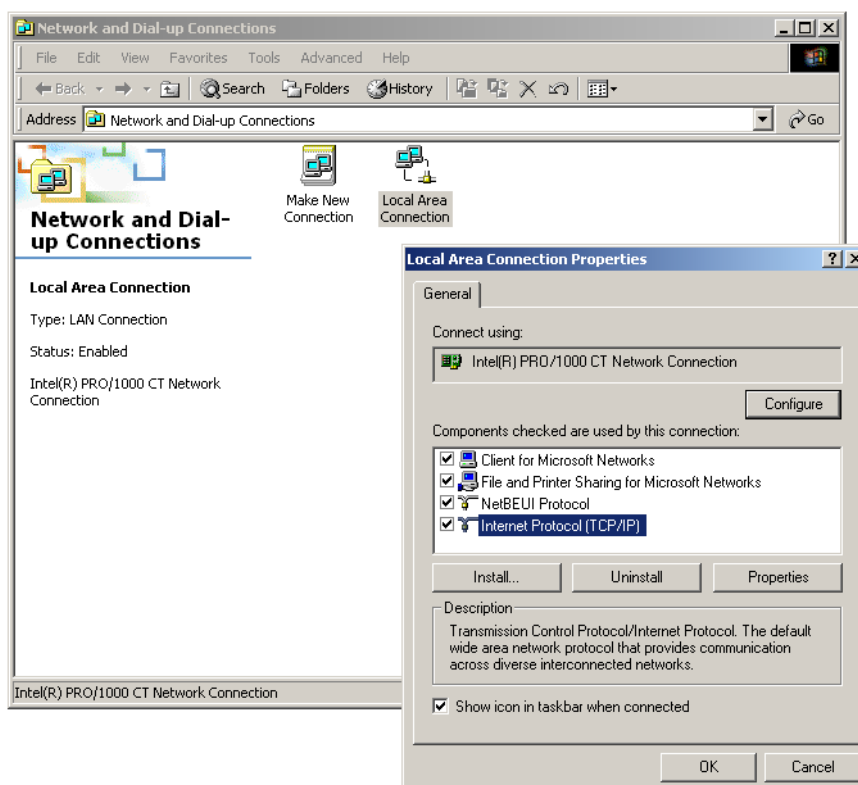3) Select **Internet Protocol (TCP/IP)** and then the button **Properties**.

Fig.131 - Local Area Connection Properties

4) In the **Internet Protocol Properties** window of fig. 132, take note of the IP address (could
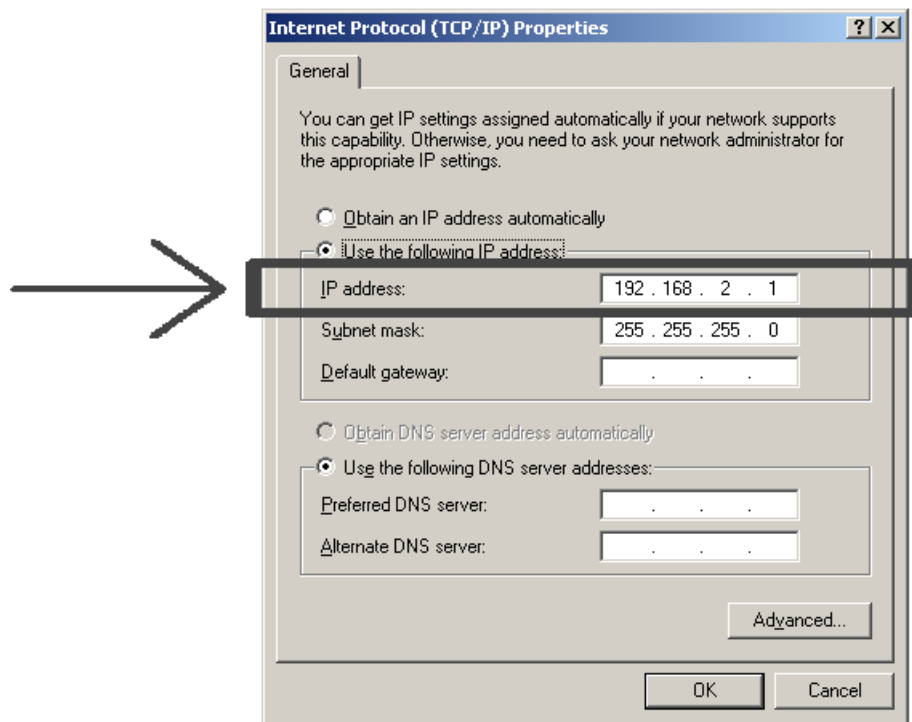
be for example: 192.168.1.177).

Fig.132 - Finding the IP address

The IP address is composed by four digits.

***The first three digits must be the same for every LaserLab printer
in the network and for every PC with OrderMakerMF installed on.***

In the default configuration, all the addresses should be like this:

192.168.1.x

Where **x** is a number between 1 and 255.

15.2.2 Mapping network drives of the LaserLab printers

*The following procedure must be accomplished for every **LaserLab** printer in
the network.*

1) Double-click on **My network** places icon. In the window called **My Network Places**, select
the operating LaserLab printer.

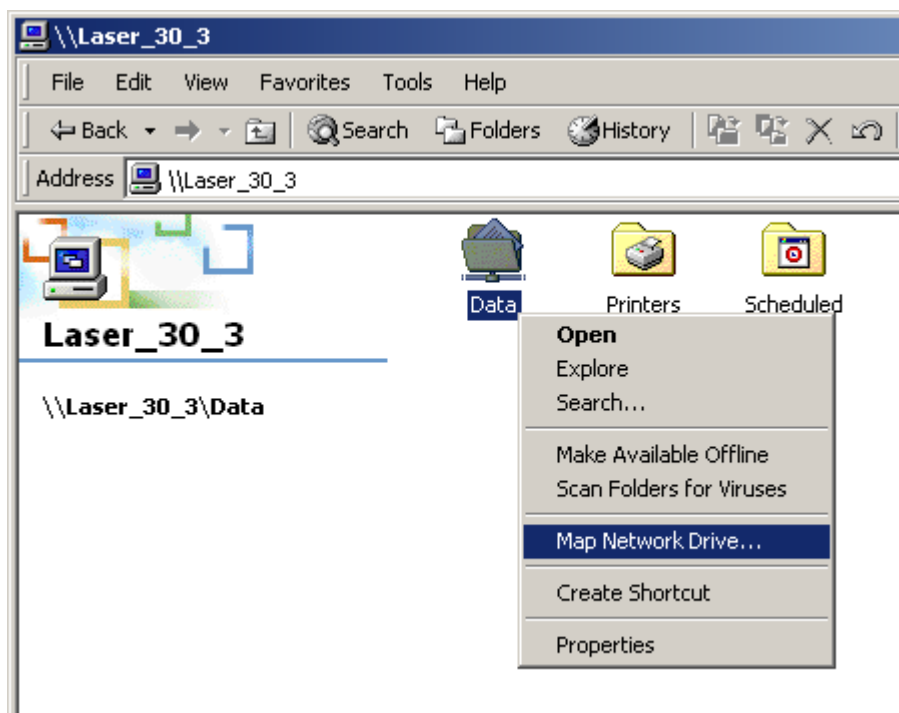2) Double-click on the printer's icon to view its contents. Localize the folder **Data** (fig. 133).

Fig.133 - Data folder of the LaserLab printer

3) Select the Data folder. Right-click on it, and choose from the pull-down menu (fig. 133) the item Map **Network drive...**
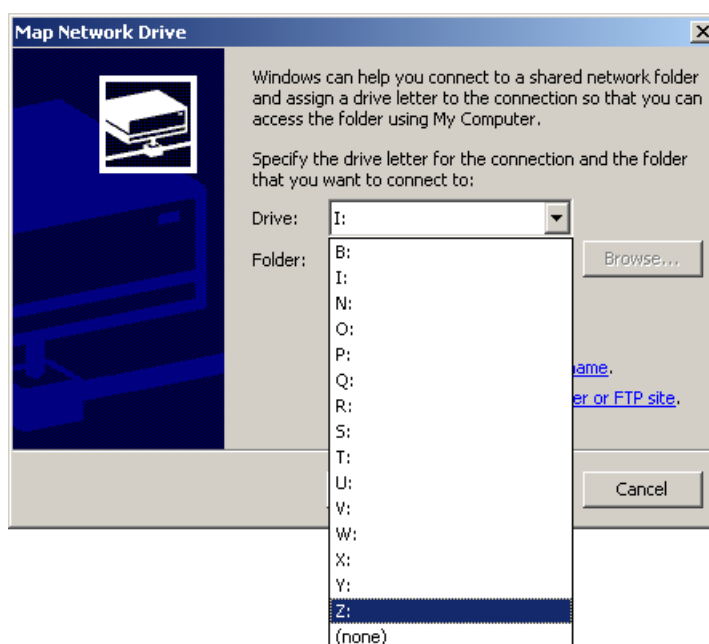

Fig.134 - Map Network Drive window

The window **Map Network Drive** appears (fig. 134 on page 142). In the **Driver** pull-down menu, we suggest to choose the **Z:** letter, or anyway the last letter available. This to avoid undesired renominations in case of hardware replacement/upgrade.

4) Give **OK** to close the window. The result of the operation can be seen by clicking on the icon **My computer** placed in the desktop. As shown in fig. 135, now is present the drive **Z** referred to the **Data** folder of the LaserLab printer.
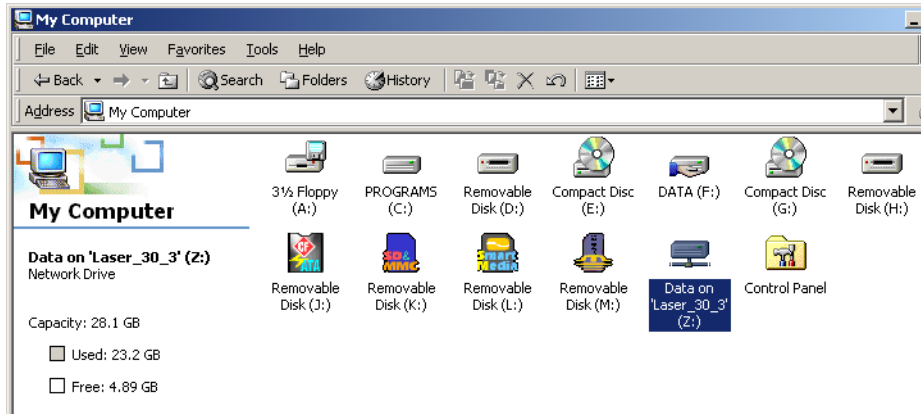

Fig.135 - New driver for the Data folder

5) The network drive must appear in the **Order Manager** main settings, as shown in fig. 136. to let this window appear, select:

File > Order processor > Order Manager main settings...
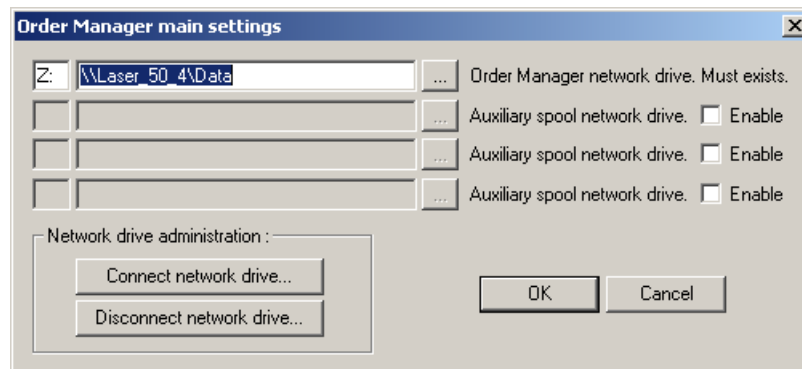
From Imagelab® main menu.

Fig.136 - Order Manager main settings window

15.3 Installing OrderMakerMF®

Start the installation by double-clicking on the icon named **Order-MakerMF 1.xx.yyy full install.exe** shown in the fig. 137 (where **xx.yyy** is the release number).

Fig.137 -
OrderMaker icon

The start screen of the installation program is shown in fig. 138. Select **Next** to go to the next step.
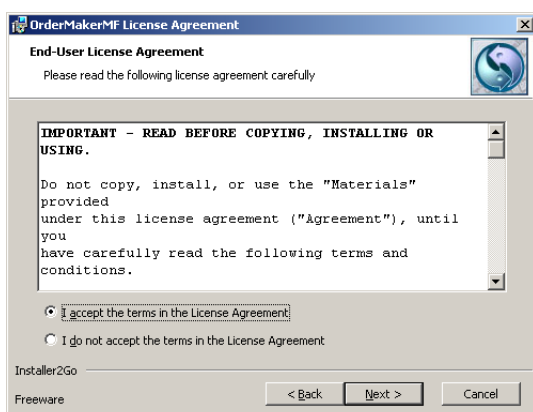
Fig.138 - Installing OrderMakerMF (1)

Read carefully the licence agreement (fig. 139). Select **I accept the terms in the license agreement,** then **Next**.
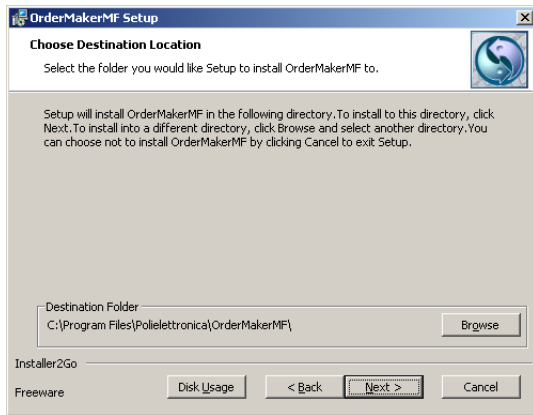
Fig.139 - Installing OrderMakerMF (2)

Fig.140 - Installing OrderMakerMF (3)

In the next window (fig. 140) is shown the folder for the program to be installed. We suggest to keep the default folder. Select **Next** to go further.
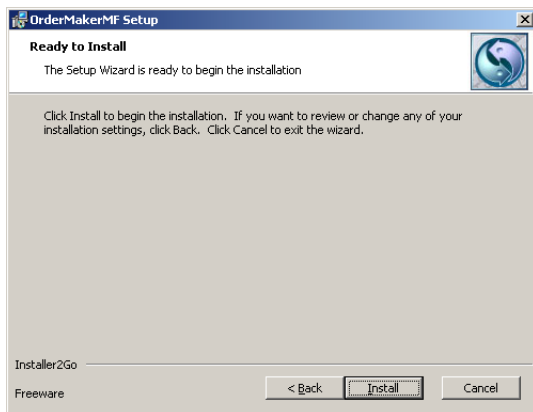

Fig.141 - Installing OrderMaker (4)

In the window of fig. 141, select **Install** to start the installation in the chosen folder.

Fig.142 - Installing OrderMakerMF (5)

After few seconds the installation will be completed. Again, select <u>N</u>ext.
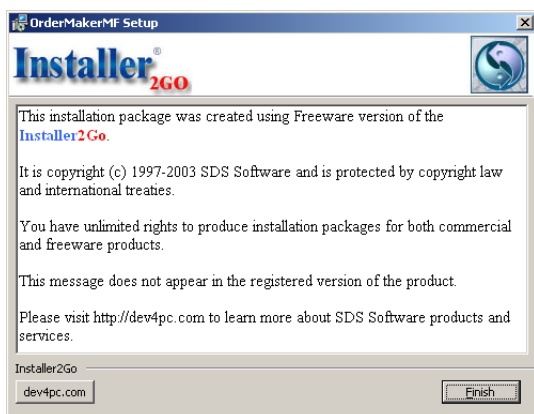
Fig.143 - Installing OrderMakerMF (6)

In the following window, shown in fig. 143, select <u>F</u>inish to exit the installation procedure.

Once completed, a link to the OrderMakerMF® executable will be shown on the desktop.

15.4 Starting OrderMakerMF®

Attention*: it is necessary for all the PCs having* OrderMakerMF® *installed on them to have the same user name and the same password*

We suggest to keep the default setting, that is **Administrator** as user name and no password.

Double click on the desktop link to run OrderMak-erMF®. First, the software attempts to locate all the **LaserLab** printers connected to the network (fig. 144).

Fig.144 - Starting OrderMakerMF

Attention: OrderMakerMF® *can only work together with* **LaserLab** *printers having* ImageLab® *version 3 (or higher) installed on them.*
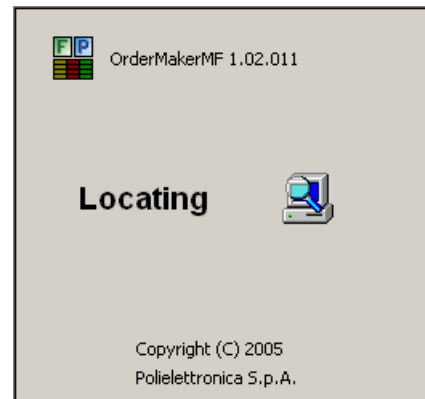
If software fails locating the printer, it will not start. Please refer to section 15.8 on page 154 to solve this kind of problems.

Once the program has started, the main window appears as shown in fig. 145. Divided in tabs, in the window upper part can be seen all the printers located. Each print has a mark associated whose color can be:

RED: On the printer is installed ImageLab® rel.3 or higher, but it is not running at the moment.

YELLOW: On the printer the software ImageLab® rel.3 or higher, is present and running, but it is **not** printing at the moment.

GREEN: On the printer the software ImageLab® rel.3 or higher, is present and running, and **it is printing** at the moment.
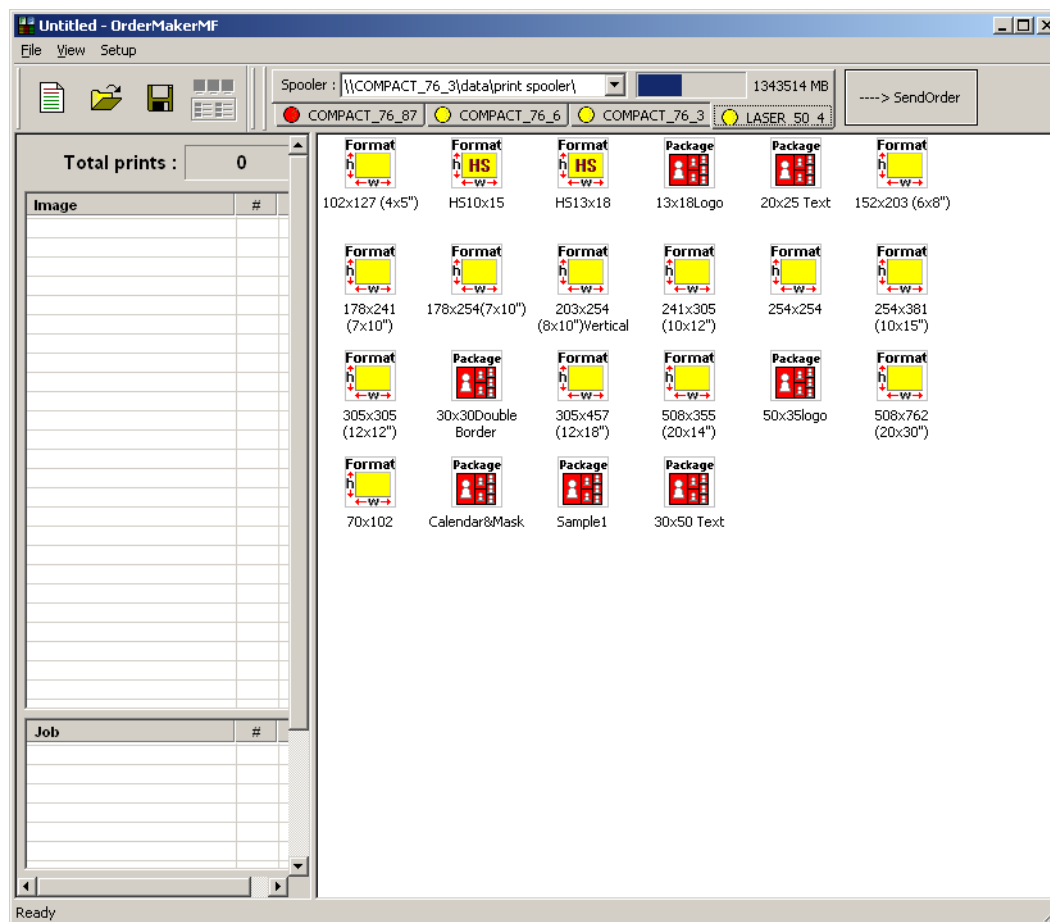
Fig.145 - OrderMakerMF main window

Selecting the tab corresponding to the desired printer, all the printable formats of that printer will be shown (that is, the contents of its **print spooler**).

15.5 Creating an order

To create an order, select the printer where the order is supposed to be printer, then simply drag the images and drop them in the OrderMakerMF® main window, on the desired format.

Multiple images can be dragged and dropped at the same time, by using the CTRL *and/or* SHIFT *keys, following the common* Windows® *operations.*

When dropping the images, a dialog will appear. Using this dialog it is possible to set the number of copies of that order to be printed.

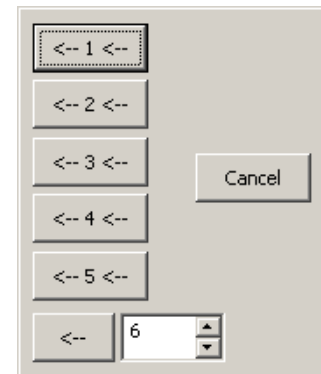The order structure is visible in the main window. For example, consider the order shown in fig. 147 on page 150. In the left column the total number of images (**Total prints**) can be read. Follows a list of the images composing the order (**Image**). Selecting one of the images, in the **Job** frame are shown the related format, and for each format the number of copies to be printed. In the example, 3 copies of the AAF1429.JPG image will be printed, one in 10x15 format, and the other two in 13x18 format.

15.5.1 Removing/modifying images from the order

Select an image and double-click on one of its formats (**Job** section): it is possible to modify the number of copies to be printed in that format (**Job options** window, fig. 146).

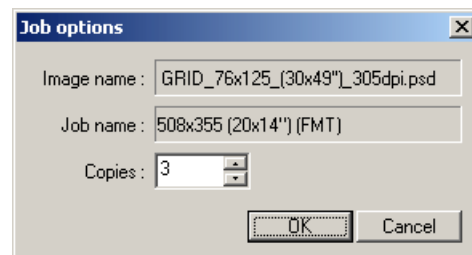Fig.146 - Job options window

To delete all the copies in a certain format, select that format and press the **DEL** key.

If instead the image is selected, pressing the **DEL** key will delete the image together with all its
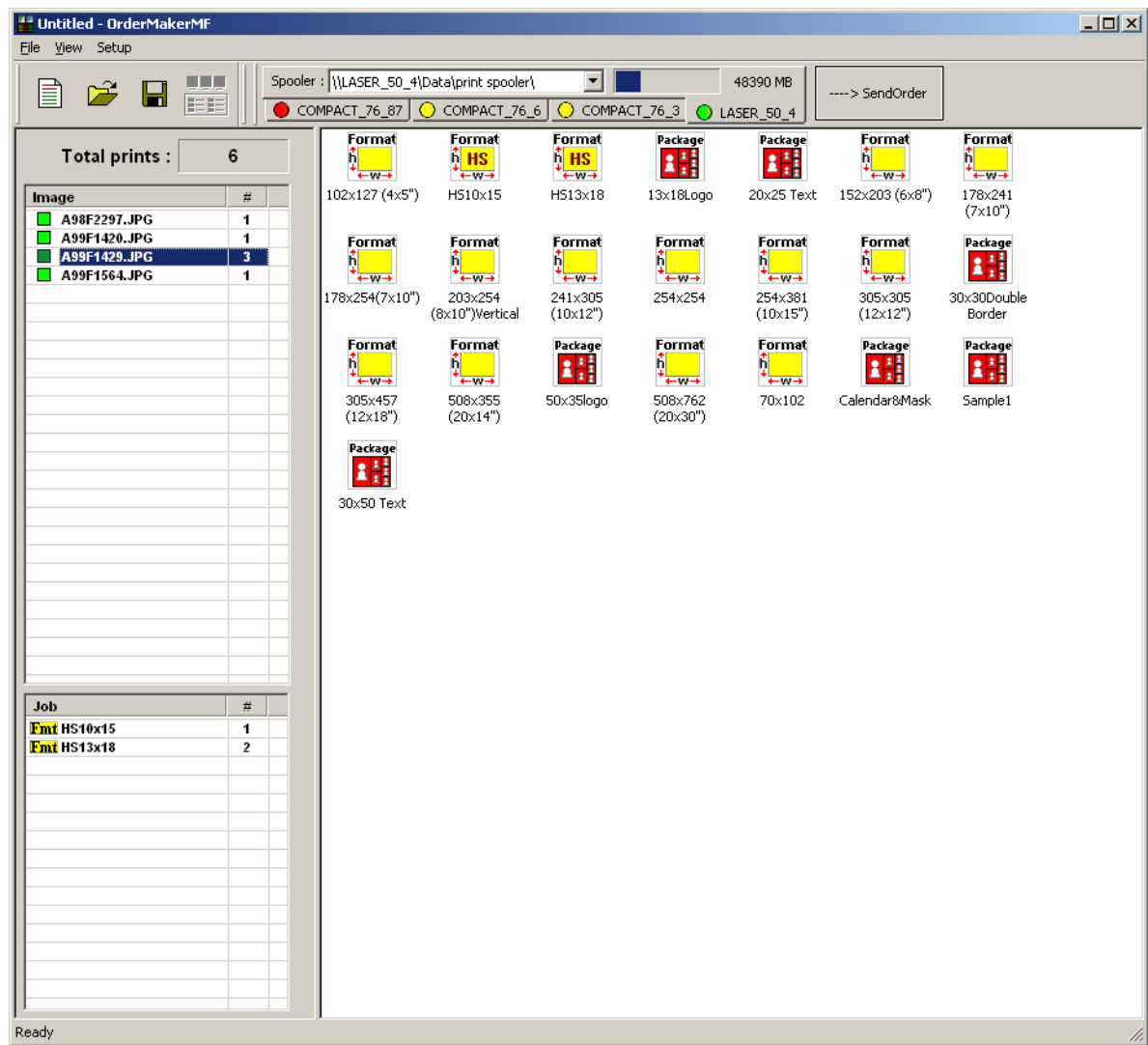
formats.

Fig.147 - OrderMakerMF main window

15.6 Sending the order

Once completed the order, select the **Send Order** button on the upper right corner of the main window.

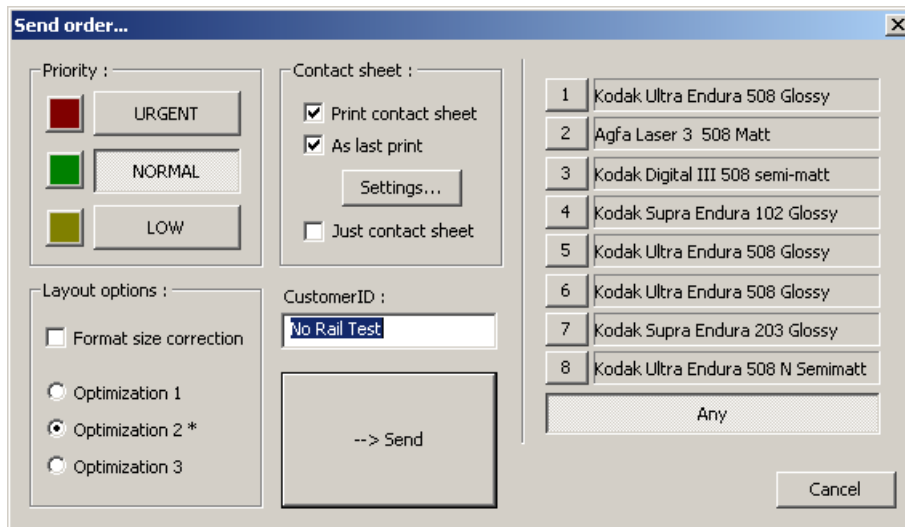**The Send order...** window appears, as shown in fig. 148.

Fig.148 - Send order dialog

Send	Select this button to send the order
Priority	In this frame it is possible to choose the level of priority of the order between three: **URGENT** (red), **NORMAL** (green), **LOW** (yellow).
Layout options	In this frame it is possible to set some aspects of the layout of the images on the sheet. Select **Format size correction** to add 3mm and compensate the effect of the cutter. And with the **Optimization** options it is possible to reduce or eliminate the waste of paper of the cutter.

The option **Optimization 1** places the images on the sheet in a way to minimize the waste of paper. In this way, it can happen to have images still presenting a thin white border, then a manual refinement could be necessary after the cut.

The option **Optimization 3** completely eliminates the need of manual refinement after the cut. On the other hand, this cut in based on a non-optimized use of the sheet, since the waste of paper is not minimized.

The best compromise between the to options above is the **Optimization 2***, which is also the default option.

Paper type	In the right column it is possible to choose the paper type on which the order has to printed. Selecting **Any**, the order will be

printed anyway, regardless of the paper actually loaded on the printer.

Attention: if the paper type is different from the one actually loaded, the order will wait until the requested paper is loaded on the printer.

Customer ID A text line (for example, name of the customer) can be added to appear in the photo index.

Contact sheet This frame contains the options for the photo index, enabled by selecting the **Print contact sheet** box. The options **At last print** places the contact sheet as the last to be printed (otherwise, with the optimization settings, could be placed anywhere in the sheet). **Just contact sheet** prints only the contact sheet and not the order.

15.6.1 Options for the contact sheet

Press the **Settings...** button in the **Send order** window, to let appear the Contact sheet settings window (fig. 149).
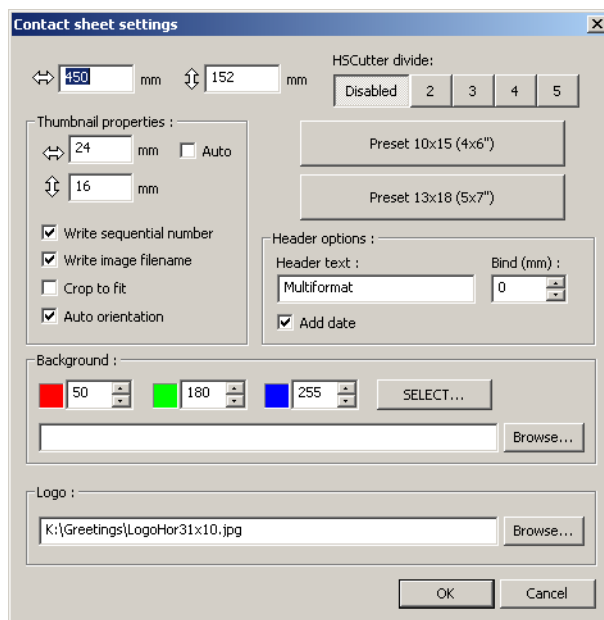

Fig.149 - Contact sheet settings dialog

Most of options are self-explanatory. The dimensions of the index and the ones of the **Thumbnails** can be set. The HSCutter pre-defined formats can be chosen. The **Header** section is dedicated to the text that can be added to the index. It is also possible to set the **Background** (either a color or an image), or insert a **Logo**.

15.7 Other features of OrderMakerMF®

15.7.1 Autoprint and OrderMakerMF®

Even if OrderMakerMF® is installed in the system, it is still possible to use the **Autoprint** folders to send orders.

Select

File > **Order Processor** > **Settings...**

From the main bar, the **OrderProcessor setup** dialog will appear (fig. 150).
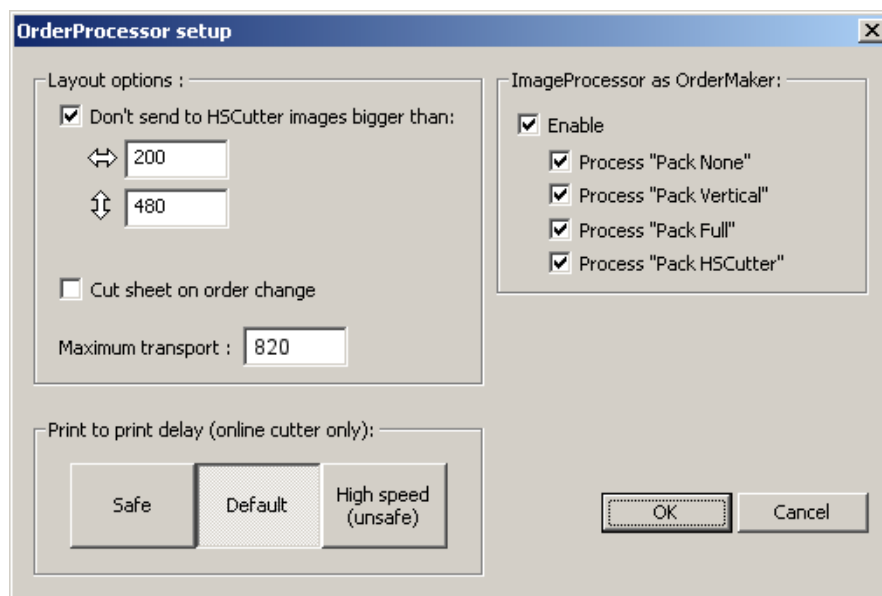
Fig.150 - OrderProcessor setup dialog

In the **ImageProcessor as OrderMaker** frame, check mark the **Enable** box. Also, we suggest to enable all the shown formats.

In this way the user can go on using the Autoprint folders, these ones will be processed transparently by OrderMakerMF®.

15.7.2 Using OrderMakerMF® with the HSCutter MSA

When using a **HScutter MSA 50** or **76**, in the **OrderProcessor setup** window (fig. 150) select **Cut sheet on order change**. In this way the sheet will always be cut on the end of order.

When using a **HScutter MSA 76** together with a **LaserLab 76** or **76 Compact**, modify the **Maximum transport** value from the default 820 to **1250**.

15.8 Message errors. Solving the problems

15.8.1 Missing connection errors

If OrderMakerMF® is not able to connect to the printer the order has been sent to, the message Can't connect to ImageLab will be presented on the **Message viewer** window (fig. 151). Among the causes of this fact there can be:

- *Network connection has accidentally been lost after the order transmission.* Check the network connection and send again the order.

- *Due to heavy traffic over the network, timeout has expired.* Send again the order when the traffic is lower.

- The ImageLab® configuration is not corrected or has not been completed in the Laser-Lab printer. Repeat the procedure explained in section 15.2 "Network settings for a correct use of OrderMakerMF®" on page 139.

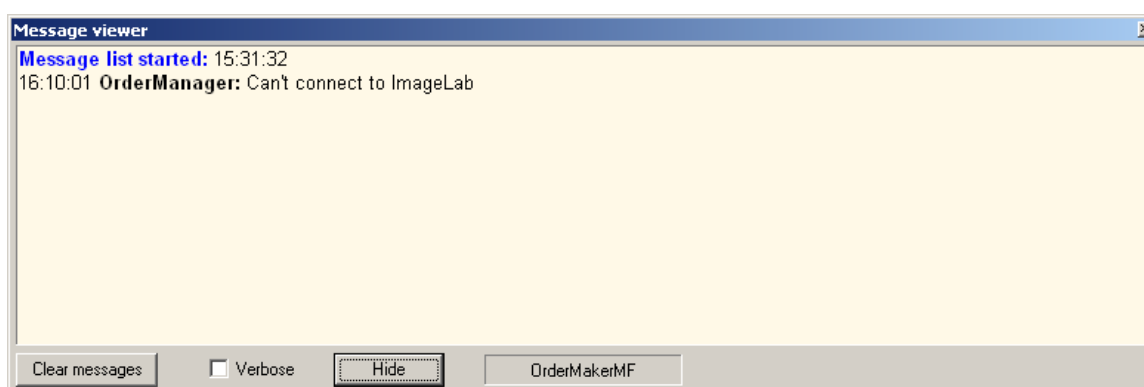Fig.151 - Message viewer window

15.8.2 No printer located over the net-work

If the software can't locate any of the printers, it simply does not start and show the message shown in fig. 152. In this case the network settings are not correct. Repeat carefully the procedure explained in section 15.2 "Network settings for a correct use of OrderMakerMF®" on page 139.
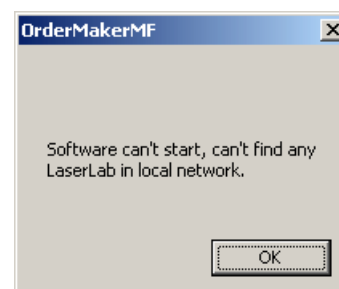

Fig.152 - Error message

16 Upkeeping

ATTENTION: every maintenance operation must be performed only after the equipment has been switched off and all the components plugs have been removed from the UPS output socket. After every operation check again the correct working of all the equipment components.

Do not use any benzine, thinner or strong solvent to clean the plastic parts of the equipment.

16.1 Daily maintenance: compressor condense discharging

Every day the condense accumulation in the filter group must be checked, and it must never exceed the allowed level. See fig. 153.

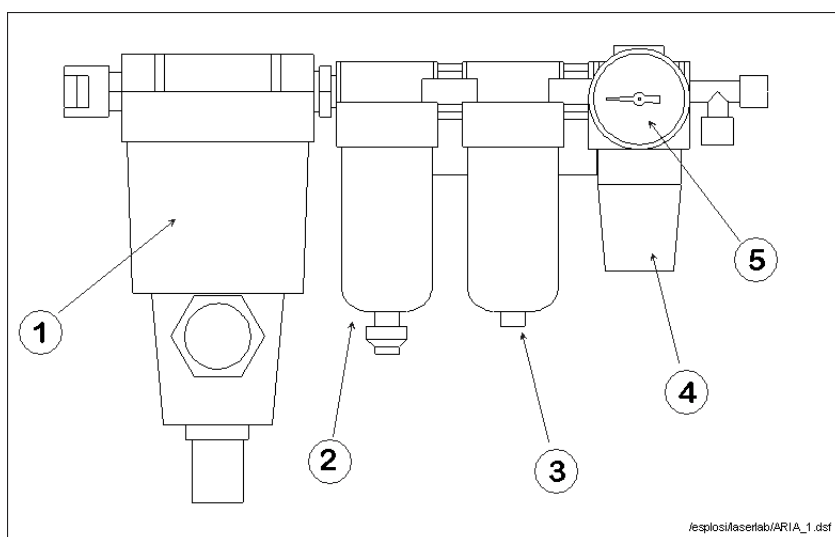Fig.153

1) Condense filter
2) Oil filter
3) Dust filter
4) Pressure reducer
5) Manometer

Usually the filter numbered **1**, **2** and **3** discharge automatically the condense, but the continue presence of air pressure can cause a fault in self discharging. To discharge manually the filters numbered **2** and **3**, it is necessary to push up the cap placed on bottom of each filter, the con-

dense inside will come out. To discharge the filter numbered **1**, unscrew the cap placed on the bottom, until the air comes out. Screw again the cap once the operation is completed.

The quantity of condense inside the filters depend from the humidity and temperature of the working place, could be normal don't find condense inside the filters.

Attention: air filters inside filtering-pressure control unit have to be replaced yearly.

If the dry air compressor (optional) is supplied, we remember to read the instructions enclosed, it is important to replace the salt filter that condense the humidity. This air compressor is able to supply compressed air at a very low RH%.

16.2 Weekly maintenance: cleaning the air filters

The filters help to limit the gathering of dust inside the printing box: dust cannot only darken the laser beams transmission system, weighing down significantly the print quality, but also form deposits on the sled guide bar (See 16.4 "Sled cleaning" on page 157). The filter is placed inside the printing section, behind the paper box; apart from air filtering, it helps spreading the air flow. If the air flow entered the printing section directly it could induce vibrations, corrupting the quality of prints. It should be cleaned with compressed air weekly.

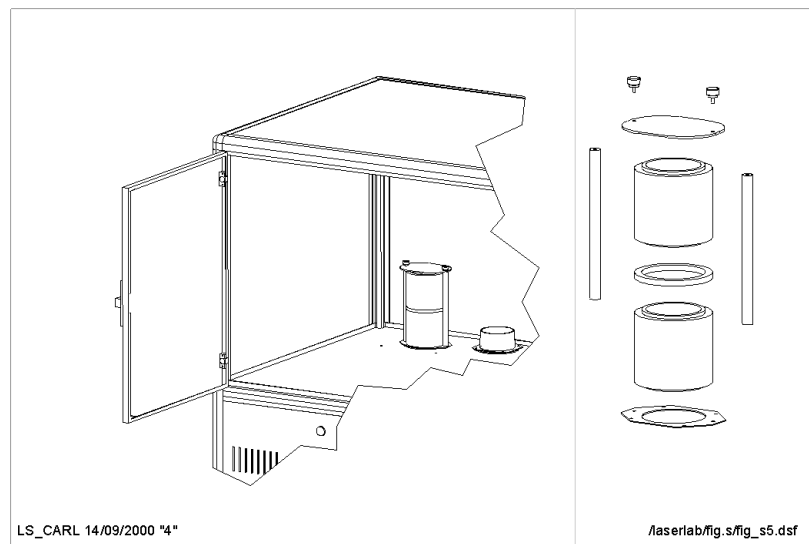LS_CARL 14/09/2000 "4"   /laserlab/fig.s/fig_s5.dsf

Fig.154

16.3 Monthly maintenance: replacing the air filters

The air filters placed inside the transport unit must be replaced monthly (see fig. 154). Also, replace monthly the external ring filter.

16.4 Sled cleaning

> **Attention: the compressed is NECESSARY to move the sled. Do not force the sled movement when the equipment is off and there is no compressed air.**
>
> **The sled can be moved only on the guide bar axis, absolutely do not try to move it in any other direction!**

The sled guide bar can gather antistatic dust falling from the paper or residues from cutting operations. A periodical cleaning with compressed air is useful, though not sufficient. With humidity, dust tend to paste and it is thus necessary to clean the guide bar monthly with a piece of cotton dipped in alcohol.

Clean the above and lateral parts of the guide with care; do not apply any pressure or repetitive movements as it may be scratched.

> **ATTENTION. When cleaning the sled, do not press or brush too much, to avoid any scratch on its surface.**

To clean the rest of the bar the sled should be moved on the opposite side (check the compressed air to be present!). Now, with minimal force, and using maximum carefulness, the sled can be moved. When the cleaning is completed, the sled must run perfectly free, with nearly no force required to it for the movement.

16.5 Yearly maintenance: pressure reduction group filters replacement

At least yearly, the three filters numbered **1**, **2** and **3** in fig. 153 on page 155 have to be replaced.

The filters are supplied as spare parts by Polielettronica.

16.6 Yearly maintenance: replacement of the brushes in the cutter internal motor

> **Important: it is necessary to replace the cutter motor brushes once a year.**

Micro short circuits are generated when the brushes in the motor are worn. These short circuits may generate unwanted starts of the linear motor before the expiring of the correct exposure time. This may cause prints with a border on top. The fault appears randomly.

The brushes are supplied as spare part by Polielettronica.

16.7 Machine working statistics

Selecting from menu bar **View, LaserLab Statistics.**.. the Machine statistics window of fig. 155 appears. Three counters are shown, for total paper meters used, total paper surface used, and total number of prints done. The **User counter** frame shows three similar counters, except for the fact that they're user resettable.
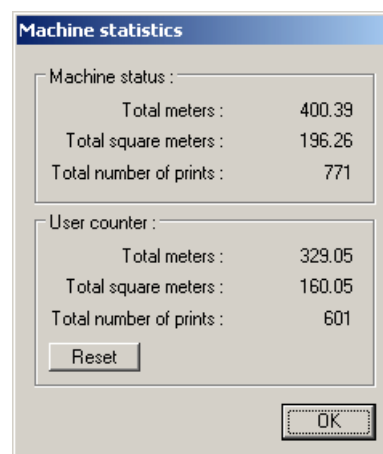

Fig.155

17 Attached documents

17.1 Attached documents list

1) CE declaration of conformity.

2) Warranty.

3) Spare parts, failure report, information request module.

17.2 Declaration of conformity

Polielettronica S.p.A., located in S.Maria Maddalena (RO - ITALY) at the address: Via Nazionale 55

DECLARES

Under its responsibility that the **LaserLab** color photographic printing equipment conforms to the following EEC directives and European standards:

Directive: **73/23/EEC** (Low Voltage Directive) and further modifications. Applicable Standards:

- European Standard: **EN60950** (96/Oct.). Information technology equipment - Safety.

- European Standard: **EN60950/A4** (97/Oct.). Information technology equipment - Safety.

Directive: **89/336/EEC**, **92/31/EEC**, **93/68/EEC** (EMC Directive). Applicable Standards:

- European Standard: **EN55022 - Class B** (96/Oct.). Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement.

- European Standard: **EN55024** (97/Oct.). Information technology equipment - Immunity characteristics - Limits and methods of measurement.

S. Maria Maddalena 2002 - June 20

02

Polielettronica S.p.A.

17.3 Warranty

Polielettronica S.p.A. guarantees the **LaserLab** for the duration of 12 months.

Polielettronica S.p.A. will repair or replace free of charge any part that, during the warranty period, should present manufacture problem. This warranty excludes any sort of compensation for any damage, direct or indirect, to persons or things.

Any defect not clearly attributable to the material or to the manufacturing will be examined in our Technical Support Centers or at our factory.

Should the faulty part claim be unjustified, all the replacement or the repair expenses substained by Polielettronica S.p.A. will be paid by the customer.

The warranty certificate and the fiscal document must be shown to the technical personnel that effectuate the repairing, or must be included with the machine if shipped for repairs.

There will be no elongation for the warranty subsequent a technical intervention on the equipment. If the repairs are made in the main Technical Support Center in Italy, all transport expenses are to be paid by the customer, unless otherwise decided.

The warranty certificate excludes any damage from transport, lack of maintenance, inadequate handling, ignoring the warnings inside the manual, or any other phenomena independent from the normal operating condition of the equipment.

This warranty is void if the equipment has been repaired by unauthorized personnel, or after the use of any accessory not supplied, recommended, or approved by Polielettronica S.p.A., or in case of removal or alteration of equipment serial number during the warranty period.

Polielettronica S.p.A. declines all the responsibility for damage, to persons or things, due to improper use or misuse of the equipment.

<div align="center">

Any controversy will be handled by:

FORO GIUDIZIARIO DI ROVIGO

(ITALY)

</div>

17.4 Spare parts - failure report - information request module

TO...

DATE......................

Customer: Model:
Country: Serial number:
Address: Your ref.
Tel.   Fax.

Spare parts order table:

Table N°	Code N°	Description	Q.ty	Notes

Technician request for the following reasons:

....

....

....

....

....

....

....

CUSTOMER STAMP AND SIGNATURE:

Index